NEW ENGLAND FARMER.

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. VIII. BOSTON, JULY, 1856. NO. 7.

JOEL NOURSE, Proprietor, Office....Quincy Hall. SIMON BROWN, EDITOR. FRED'K HOLBROOK, HENRY F. FRENCH, } Associate Editors.

GRASS—HAYING—HAY.

JULY is the month when the principal portion of the hay crop in New England is secured. It is our staple crop—the one by which we mainly increase the fertility of our farms, and having a greater money value than any single crop produced at the South;—either their cotton, tobacco or corn crop is insignificant, compared with it; and New England, rocky and sterile as much of it is, and whose soil is contemned by those living on easier and richer lands, produces a surplus for those who possess every facility for raising it, if they had industry and knew how.

Much of our best land for this crop still lies waste; it is in meadow and swamp that need either thorough reclaiming, or if partially reclaimed, draining and deep plowing. When such lands are once well set in grass, they will produce profitable crops for many successive years, with little annual expense. Another kind of excellent grass land is of granite formation, at a higher level than the meadow, but still having land abounding in springs above it. These lands are a heavy loam, quite often a clayey loam, and generally pretty rocky. It is sometimes as expensive to reclaim these, as it is the swamp, but when once swarded and fed annually with a moderate dressing of compost, they will produce from two to three tons of excellent herds-grass and red-top, for a dozen years in succession. Such, mainly, are the lands which should be devoted to grass.

The importance of this crop would justify the farmer in making a good many experiments, and in devoting considerable time to an investigation of it in all its bearings. We believe there is no crop that is commonly cultivated, in which so much loss is suffered as in the hay crop. After a selection and proper preparation of suitable lands, and seeding and growing the crop, the first error usually committed is in the

THE TIME OF CUTTING.

Professor Martyn says, "grasses are Nature's care." We wish they were more frequently the care of man. We are well aware of the variety of opinions entertained as to the proper time of cutting, and of the difficulty of not being able to secure the whole crop at the precisely appropriate time; still there is a carelessness or indifference existing, which results in serious loss. The farmer must remember that it is not so much the *bulk of hay* on his scaffolds, that is to afford nutriment to his cattle and take them through the winter in good flesh and health, as it is that the hay is secured with all its natural juices which it is possible to preserve.

In order to secure this it must first be cut at the right time. If cut too soon, before the sap is fairly elaborated into nutritive properties, such as sugar, mucilage, albumen, &c., it shrinks immensely, and when dry has but little bulk or nutriment. On the other hand, if left too long, the plant expends its energies upon the seed in accordance with the natural law to perpetuate its kind. The seeds ripen, and fall to the ground and are lost, while the stem and leaves are little better than oat or barley straw.

But if the favorable moment can be improved to cut the grass just as its blossoms begin to fall, when the seed has formed, but is not perfected, then we secure all its nutritive properties if the

GRASS IS PROPERLY CURED.

The object in making good hay, says Low, is to prepare it as quickly as possible, and with as little exposure to the weather, and as little waste of the natural juices, as circumstances will allow. When we are enabled to do this the hay will be sweet, fragrant, and of a greenish color. We still do much of our farm work under the English notions which came here with our ancestors, without taking into account the great difference in the climate of the two countries. There, they employ *four* days in curing the herd's grass, which is often admirably done under our July suns in a single day! Many farmers do not consider the effect of these cloudless suns, and the consequence is that they dry their hay until its jucies are evaporated, and a large proportion of its value lost. One cloudless July day, with a slight breeze, is sufficient to cure hay cut in the morning or the previous evening, where there is not more than thirty hundred to the acre. In such a case the swaths should be evenly spread, and it will be necessary to stir it quite often, and lay it up as lightly as possible from the ground.

A general rule should be enforced that no hay be left in swath or winrow over night, unless it be that cut just before or after sundown. There are two advantages in its being cocked: it prevents the injurious effects of dew or rain, while the slight heating process which is going on causes an exhalation which is retained in the cock, and gives the hay a most fragrant odor. In *good weather*, two days, at most, are sufficient to secure hay, even when heavy crops are cut. The cocks should not be opened on the second day until the dew has gone, and then only opened in thick masses. After lying in this manner until noon they are ready to be carted to the barn.

Clover requires a very different process. It should be cut close to the ground, and allowed to remain until the afternoon of a bright day, in the swath; then they should be carefully turned upside down with a fork, and left over night. After dinner on the following day, the swaths should be taken up with the fork and laid in a cock—not rolled or pushed up—and then these cocks may remain two nights. After that, on a clear morning, they may be turned over to admit the sun and air for a few hours, when they will be ready to go in, with their leaves all on, and as sweet and fragrant as a nosegay. A load of brush is worth about as much for cattle as a load of clover, cured as it is often done. Allen, in his "Farm Book," says there is a loss of nutritive matter in the ordinary mode of curing hay, which is obvious to every careful feeder. This is conspicuously evident, in the diminished quantity of milk yielded by cows, when taken from the pasture and put upon the hay made from grass similar to that before consumed. There is undoubtedly a combination of causes to which this may be imputed, but the bad condition of the hay is often a prominent one.

SALTING HAY.

This is now, we believe, extensively practiced, and, judiciously done, we have no doubt it is well. Those who are in the habit of placing salt before cattle, know that during the winter season they will take but little. A cow consuming a ton of hay in the cold months, we are confident would not voluntarily consume two quarts of salt—and yet many farmers are in the habit of applying *eight quarts* to a ton! This is probably the source of many of the recent diseases among cattle. It leads, also, to the slovenly practice of getting in the hay in a damp or partially cured state, under the idea that the salt will preserve all its virtues.

The whole subject of hay-making needs more consideration. Several things are suggested which must be left for another talk.

DUCKS IN CHINA.

It is well-known that a considerable portion of the inhabitants of China dwell in floating houses, or rather in boats, with large and convenient cabins, where men, women and children may be seen in abundance, having no other home, and gaining a slender livelihood by some occupation that does not require a residence on *terra firma*. In the neighborhood of Canton, many of the owners of these movable dwellings employ themselves in rearing ducks; and the sagacity which these animals exhibit is remarkable. Every morning they are allowed to leave their habitation, and indulge in their aquatic amusements; and sometimes five or six hundred of these noisy creatures are seen sporting on the waters near one of these floating duck pens. They never stray far from their homes—and the sound of a little tinkling bell seems to produce upon them a magical effect. The moment the first sound of the bell is heard, the ducks hasten towards their home with astonishing swiftness, and the commotion thus instantaneously produced in their rank, is amusing enough, each one being apparently anxious to outstrip his companions in the race—and such a scene of shoving, swimming, flying and gabbling is seldom seen among ducks in any other part of the world than in China. This prompt obedience on the part of these stupid water fowl, is the result of education; and the means used, although exceedingly efficient, are very simple. The last duck which reaches the boat is invariably seized by the duck-master-general, and is compelled to undergo a severe drubbing with a bamboo cane—and the fear of this punishment, which they are exceedingly desirous to avoid, ensures the most perfect order and obedience among these animals.

This mode of managing ducks is somewhat similar to that just and humane expedient resorted to on board of some of the English ships of war, and for aught we know, American also, to induce the men to hasten on deck with all possible despatch, when all hands are called to quarters, or for any other purpose. A boatswain's mate is stationed at the hatchway, and those who happen, through negligence, indolence or accident, to be at the fag end, are sure to get a severe "starting."—*Portfolio.*

For the New England Farmer.

LECTURES,

On the Relation of Trees to the Atmosphere and Climate, as affecting an equal Supply of Rain, through all the different Seasons—The Equalization of Moisture on the Surface of the Earth—The Salubrity of the Climate—The Fertility of the Soil.

The subscriber proposes to deliver two lectures, "*On Trees in Relation to the Earth and the Atmosphere,*" as stated above, in which he will endeavor to establish the following points:—That

1. Trees are useful and indispensable agents in theeconomy of moisture for equalizing the humidity of the soil, and for promoting an equal supply of rain throughout the year; and their usefulness depends on their situation.

2. They pump up moisture by their roots from beneath the surface, and exhale it into the atmosphere; and they arrest the floating vapors of the atmosphere and shed them upon the soil. Hence they keep both the soil and the atmosphere in a moister state then they would preserve without them.

3. They loosen the soil to a great depth by means of their roots, and thus open it to the chemical influences of the atmosphere.

4. They act as conductors of the electric fluids of passing clouds, and cause them to discharge their rain upon the earth; but their usefulness in this respect, depends on their elevation.

5. Were the earth entirely stripped of trees, our wet and our dry seasons would be periodical, and dependent entirely on meteorological changes; droughts, especially in summer, would be excessive.

6. Were the earth entirely covered with trees, the moisture both of the soil and the atmosphere would be excessive, and all the lowlands would be lakes or morasses.

7. Were the continent deprived of its forests in tracts, some of a hundred miles square being destitute of trees, while others of equal extent were densely wooded, the country would be liable to squalls, whirlwinds, and other convulsions of the atmosphere.

8. Were the hills all laid bare of trees, and turned into arable land, while all the vales and lowlands were covered with forest, the trees would be in no respect serviceable to agriculture, answering the purpose, neither of protection nor fertilization. They would receive all their washings from the hills, but they would impart nothing to them in return; all their foliage would droop and decay at their own roots.

9. Were the hills covered with trees, and the vales and the lowlands converted into arable lands,—that is, were the highest points of the country's surface covered with trees, and the lowest points devoted to tillage—the arrangement would be such as to secure the greatest advantage, from their influence. Under these circumstances (were they universal) there would be comparatively but little drought; the trees would answer for protection in the best possible manner, and all their foliage would contribute to fertilize the plains and valleys below them.

10. Trees in elevations temper the severity of cold in winter, and of heat in summer, and thereby equalize the climate; while in the valleys and lowlands they produce the opposite effect.

11. Trees on elevations break the violence of the winds, and lessen the liability to storms and hurricanes, by preserving an equilibrium of heat and moisture on the surface of the earth, and by promoting an electric equilibrium in the atmosphere.

12. Trees growing in the lowlands serve to retain moisture where there is already an excess of it; on elevations they retain the moisture in places which would otherwise be dry and unproductive.

Those above enumerated are some of the points which the subscriber intends to establish; but they are only a few of the vast number of the services performed by trees for the benefit of man. He will show not only the general value and indispensable necessity of forests to climate, and to the purposes of agriculture, but he will also prove that their advantages depend on their situation, and that in some places they are positively injurious. He will point out the way in which they should be disposed, in order to produce the most beneficial influence upon climate and upon soil, how they may be made to keep dry places moist, barren places productive, and to secure the double purpose of irrigating and fertilizing the soil. All these points, and many others, he will establish by well authenticated facts, and by the testimonies of eminent travellers, naturalists and philosophers.

He will dwell particularly on the services of trees in their right situations, as electric and chemical agents, and show how, by the proper distribution of them, were the whole community to work in concert, our climate might be permanently improved. Our people are sufficiently intelligent and public-spirited, to act in concert for the judicious planting and clearing of forests, if it could be demonstrated to them, that there is indeed one way of clearing and planting which is useful, and another way of clearing and planting which is decidedly injurious to soil and climate. These points the subscriber believes he can successfully maintain. If he is mistaken in some of his views, the value of his attempt will not be diminished by a few errors of theory, if his efforts do but lead the public to give this subject their earnest attention. WILSON FLAGG.

Andover, Mass.

For the New England Farmer.

HOME-MADE GUANO.

Much as has been said and written upon this subject, there are still some who neglect this source of enriching the farm and garden, viz., the scrapings of the poultry-roost. I have used it for two years, and am fully convinced of its utility as a fertilizer. For all kinds of garden vegetables, I consider it excellent. Last season I used it in the hill on corn, but had not quite enough to go over my piece, and the result was, there was fully one-third more corn where it was applied than where it was not, though I put only a small handful to a hill.

It was prepared as follows:—One-half hen manure, one-half decomposed swamp muck, and one bushel of ashes to four of the mixture, put in the day it was used. The ashes should not be put in until it is to be used, as they will set free the ammonia and thereby cause a loss. In conclusion, save what you have at home, before going abroad after fertilizers; so says common sense.

Mechanic Falls, Me. S. TENNEY

MASSACHUSETTS AGRICULTURE.

Before us, we have the "Third Annual Report of the Secretary of the Massachusetts Board of Agriculture, together with the Reports of the Committees appointed to visit the County Societies," and giving some account, also, of their condition. The volume opens with a list of the persons composing the State Board. The report of the Secretary follows, and presents a statement of the management of the farm at Westboro' during the past year, together with tables showing the amount of food and milk of cows for definite periods. The general improvements of the farm, the amount and kind of crops, and the experiments with manure, are given at some length, and are accompanied by such judicious remarks of the Secretary as seemed to be necessary to a clear understanding of these several topics. Considerable space is devoted to a description of certain farm implements, and with illustrations of them. Under this head the short essay on the structure of the plow, and the application of the draft, should be read with care by all who either direct, hold the plow, or drive. In this portion of the report we find several replies from men of experience, in various parts of the State, to inquiries of the Secretary, in relation to the practicability and expediency of using the mowing machine. The writers—we believe all of them—favor its use. Valuable remarks and suggestions upon these returns are made by the Secretary; and these, with the report of the committee appointed by the Massachusetts Society, who offered a premium of $600 on a mowing machine, give such descriptions of their use as to enable one to form a pretty correct judgment of them as labor-saving machines for the farm.

The Secretary states that from the office of the Board he has distributed many thousand packages of seeds of different varieties, and that hereafter this will be made a more prominent object of attention. He also suggests that a regular system of exchange is highly desirable, by which plants, fruits, &c., which have been found to succeed in one section could be brought to notice in other sections. His remarks on this topic are pertinent and worthy of consideration, and with an excellent letter on the subject of the destruction of birds on our annual Fast day, which was sent into every part of the State, he closes his report to the Board.

The next division is the reports of committees from the Board, to visit the several county exhibitions. The plan is an excellent one, for several reasons. If the reports are impartial and faithful, they give a synopsis of all our exhibitions. They should never flatter, but commend what is worthy, and point out plainly what seems erroneous, or where obvious improvement may be made. Knowing that a person of experience and keen observation is to be present for the very purpose of noting merits or deficiencies, a society will make greater effort to call out the products of the county, and to have every department of the show properly arranged, and in order. These visits prompt a wholesome ambition, while they are, in themselves, or should be, a sort of review of the transactions of a particular society for the year. But as a general thing, they do not go far enough; while they tell us that a county has made great progress in the breeds of its cattle or horses, and in the aggregate of its grains and grasses, we want to know, also, what influence these operations have had upon the homes and hearts of the people; whether the advancement is strictly confined to the specific objects set down in the bill, or whether a better knowledge and practice of these specific things has awakened a general desire for improvement in whatever goes to make up the sum of human comfort and happiness. Is there a general better cultivation of the soil? Are the tables of the common farmer supplied with a greater variety, and a better quality of vegetables and fruits than they were ten or twenty years ago? Is farming now better understood as an art, and a science, by those who direct its operations? Are inquiries on foot, and investigation encouraged? Are women interested and contented in the occupation? These, and many other inquiries, should be suggested to the delegate by the scene which he visits, and the influence of these operations upon the condition of the people should be made known to the Board; and in order to accomplish this, the delegate should pass two or three days among the people, whose exhibition he visits. We have read all these reports with some care, and have been gratified in the occupation.

The next general subject is on *agricultural statistics;* this we shall pass over now, and bye-and-bye give a page or two in full. They will be found of great value and importance.

The returns of societies, analysis of crops, meteorological observations, &c., the reader must examine for himself.

The abstract of returns of the county societies presents a mass of valuable and highly interesting matter. It has been clipt of its redundancies by the Secretary, and presented to the reader in a terse, compact, and vigorous form, and occasionally accompanied by suggestions or remarks from his own pen. These abstracts alone would make a volume of permanent and practical value. Some of the reports on neat stock, on fruits and flowers, and on domestic manufactures, are admirable.

One hundred and twenty-nine pages are then occupied by extracts from addresses delivered before the various agricultural societies of the State during the last year, and they contain an amount of suggestion, varied information and practical good

sense, such as have been rarely brought into so small compass before.

The volume closes with a carefully prepared Index, and is a credit to the printer, to the Secretary, who has moulded and brought it into shape, to the Board of Agriculture, who has furnished materials and general direction, and to the State, whose munificence and fostering care have produced such happy results.

It is handsomely illustrated with fine engravings of cattle, swine, poultry, machines and implements, and we do not hesitate to say, is a model volume for our sister States.

MEN ON THE PACIFIC.

An Englishman who has resided several years in Wisconsin, and since in Washington Territory, says in the *Country Gentleman*, of England, the Atlantic Coast and the Pacific Coast:—

1. In the first, a man is of ruddy complexion and full flesh; in the second, sallow and spare; in the third, about like the first. In the first, when in health, labor never *tires* him, and food and rest can be foregone for a while with considerable indifference; in the second, labor *tires*, and food and rest are found to be *necessary* at the usual times; in the third, it nearly resembles the first. In the first, he desires substantial food; in the second, knick-knacks; in the third an equal number of each.

2. Feminine beauty, in the first, consists mostly in a very soft and delicate skin and radiant color. In the second, a finely formed countenance, and finely proportioned, easy and graceful body. In the third, a union of the two, and therefore excelling both the others; and as Circassia is the apex of beauty in the old world, so is this destined to become in the new.

3. In the first, the prevalent diseases are generally of the chronical or lingering class, and appear to arise chiefly from the want of tenseness of fibre, and inaction of the secretions and excretions and secretions; they are mostly, scurvy, scrofula, swellings, rheumatism, hypochondria, dropsy, flatulent cholic, gravel, consumption, and putrid fever. In the second, including the South so far as before mentioned, bilious fever, dysentery, flux, diabetes, dropsy, inflammations and congestions of the liver, lungs, and brain, and the "tarnal" ague. In the third, we claim almost an exemption from all the above, and it is hard to say if any disease prevails. In a locality or two, on the Williamette in Oregon and Columbia river bottoms, the ague has prevailed to some extent, but elsewhere there appears to to have been no prevailing sickness, with the exception of now and then coughs and colds. In the first, a man dies of slow and lingering sickness; in the second, of acute and violent disorders; in the third, by accident, violence, intemperance, or real old age.

5. In England, a working man is a *drudge*, but *his hours of labor are moderate;* in the States, *he toils through too many hours in a day;* in this country, *he merely does enough.*

6. In the first, a poor man contiues such of *necessity;* in the second, through *sickness;* in the third, he *cannot remain so.*

7. In the first, he *never makes a start;* in the second, *starts easily;* in the third, *with privations.* The reason of the last is that the necessaries of life are high in price, and those who have wealth are too lazy to hire much for the sake of increasing it.

For the New England Farmer.

LARGE AND SMALL POTATOES.

FRIEND BROWN:—As "planting time" is at hand, allow me to revive the old theme which has brought into your sheet statements from so many good, practical farmers.

Opinions, antagonistic, you have published at length. I have carefully read them up, and it is clear to my mind that *large potatoes* should have the preference over small ones for planting. Yet to many, it is not a well settled fact or a well settled principle, that small potatoes will not produce as abundantly as large ones, but it is positively contrary to all farm practice in planting all kinds of seed.

What would induce the farmer to riddle out his smallest grains, or shell off the tops of his ears of corn, for seed? Are not the cases exactly parallel? If we believe "as a man soweth so shall he reap," or, in the maxim of putting "good seed in good ground," our anxious hope is strengthened in the coming harvest.

Now my farming friends, I propose a plan which will add but little to your labor, and may do much for posterity.

1st. Of all long varieties of potatoes, cut off the cluster of small eyes, called the seed end; then cut the potatoes in quarters, lengthwise, and plant two feet apart; three to five stalks in a hill will produce more weight than a dozen or more.

2d. For the next row, leave on the seed en.., and cut in quarters; plant two feet apart.

3d. Try the same experiment with the medium size in the third row.

4th. The same, with sizes from a Seckel pear to a hen's egg for the fourth row, or make two sizes of what is called small ones and plant in separate rows.

5th. That each row shall be planted with the *same weight*, which is the only fair test in seeding.

I shall look for the first row to produce as many pounds as the second, with less small ones; and as to the third and fourth row, I shall reckon on a large decline of size and weight.

Formerly it was said, "potatoes hardly pay for raising,"—but lately, a bag of money is needed to supply one's family with them. Careless cultivation is now unprofitable, perhaps disreputable. Certainly the farmer has no cause of complaint as to prices of his products. We look upon him as the great almoner, distributing the work of his hands to a hungry, starving, ungrateful people. We wish him God speed, and while skill has marked the age in the improvement of machinery and the arts, every implement in husbandry has kept pace with them; sensibly have his burdens been lightened by these ingenious and well timed discoveries. May we look for a good list of potato reports next autumn.

H. POOR.

New York, May, 1856.

REMARKS.—We do not fully agree with friend Poor. The potato *is not* the seed. We cut a

minute slip of horse radish and plant it, but it produces as large a root as though we had planted a piece weighing a pound, and so with many other plants. We have experimented with potatoes for several years, but have not been able to see any sort of difference in the product between planting large or small ones. But let us have the experiments he suggests, by all means.

For the New England Farmer.

RURAL ECONOMY OF THE BRITISH ISLES---No. 13.

MIDLAND COUNTIES.

BUCKINGHAM, BERKSHIRE, OXFORD, WILTSHIRE, WARWICK, WORCESTER, RUTLAND, LEICESTER, STAFFORDSHIRE, NOTTINGHAM, DERBYSHIRE.

Pursuing our agricultural tour, we arrive at the central counties of England.

Buckinghamshire, directly west of London, has an area of 470,000 acres, with a population of only 160,000, which, in England, indicates a county exclusively agricultural. The lands of this county are about equally divided among the various crops, the farms are of all sizes, large, small and middling, the extent of hill and level is about the same, and strong and light soils divide the county between them. The valley of Aylesbury is reckoned one of the most fertile in the kingdom. Its pastures are devoted to the fattening of sheep and oxen and the feeding of milch cows in the proportion of about one-third of each of these kinds of stock. There is no remarkable feature in the agricultural condition of the county.

Berkshire adjoins Surrey higher up the Thames. Its soil is sandy and poor in the east, as in Surrey, and in this part are Windsor Forest and tracts of uncultivated heath; the rest of the county is composed of calcareous hills or downs, and of a valley famed for its fertility, called the White Horse Vale, from one of its chalk hills having been cut in the form of a horse. The chief occupation of the valley is the making of cheese. The chalk hills pasture sheep similar to the Southdown. The fattening of pigs is carried on to a great extent near Farringdon, the breed being the well known Berkshire.

The most celebrated farm in Berkshire is that of Mr. Pusey, President of the Royal Agricultural Society. The farm consists of 377 acres, well managed in all its branches. But the most striking thing is the breeding and fattening of sheep. The flock consists of 800 head, half of which are breeding ewes. In winter, they are fed with roots, and during summer on irrigated meadows. Mr. Pusey proposes to feed, during the five summer months, 75 fine Southdowns upon two acres of these irrigated meadows. The sheep are put on the meadows in pens, and as the grass is eaten down, the pens are shifted. Before putting the sheep on, the water is stopped off, and let on again, when they are removed. Mr. Pusey asserts that, fed in this way, and finished off on corn and oil-cake, in sheds, they are fattened, at a year old, and sold at a high price to the butchers. All acknowledge that Mr. Pusey has succeeded in fattening four times the usual number of sheep, and doubling the produce of wheat on his farm. But Mr. Pusey's farming is high farming, and the general opinion is that he does not realize a profit from it. High farming is well for those who can afford to lose money, and, by its experiments, may suggest methods, by which economical observers can obtain successful results.

Oxford is an epitome of the soil and agriculture of all England.

Wiltshire is divided into two very distinct parts, north and south. The northern portion, consisting of verdant valleys, through which flow the tributaries of the Avon, is a country of grass and dairies. The southern, composed of extensive calcareous downs, like Dorset, is a region of wheat and sheep. Here we have the famous Salisbury Plain. In the south large farming prevails, and Salisbury Plain presents to the eye the appearance of a deserted country, where a few farms, at great distances from each other, are hid from view, in hollows; and where fields of wheat, without a tree or fence, extend as far as the eye can reach. It would appear that an excessive and mistaken application of large farming has been here practiced. In no part of England are wages lower or poverty more rife.—The farms are too large for the capital employed on them, and not suited to wheat, the favorite end of large farming. The size of a farm is to be fixed by a sound discretion, taking many things into view; but it should not be disproportioned to the capital employed on it. This is an axiom in agriculture. There is a limit to everything. Large farming is well, when it diminishes the expenses of production; useless, when it increases them. That system of farming is best, which pays the best wages and the best profit, and provides most equally for the largest number from the returns of the land.

We observe quite another state of things in the midland counties of Warwick, Worcester, Rutland, Leicester and Stafford. Situated between the grass county of the West and four-course system of the east, this district presents a happy combination of both systems; it is the richest farming district in England. Beginning with Warwickshire, we at once see the chief cause of its great rural prosperity. The parts of the county which have hitherto fallen under our observation, have been exlusively agricultural, with outlets and markets, no doubt, from their proximity to London; but the great stimulus of manufactures, within the counties themselves, has been entirely wanting. In Warwickshire, Birmingham, with its dependencies, a great manufacturing district, presents itself. The population of the county is one to the acre, and four-fifths of the population are engaged in manufacturing; whence it follows, that an acre is required to produce food sufficient for one person, and that a farmer, who brings his produce to market, finds four consumers to bid for it, and these consumers all in the receipt of high wages, which enable them to pay good prices. How is it possible that agriculture should not prosper, under such circumstances?

It must not be supposed, that the soil of Warwickshire is good throughout. All the northern part of the county was, at one time, an immense moor, covered with wood and heather; now half the land is under grass, the remainder arable, and cultivated, generally, upon the Norfolk system.—Nor must it be supposed that the system of large farming prevails; the average of farms is 150 acres, and the majority under this size, in all the manufacturing counties, a circumstance which is most satisfactory to an American, as this division of farms

provides for a larger number more equally. Besides, the gross produce is greater on smaller farms than on large, when they are not deficient in capital and skill, as is shown in these counties. A tour through this smiling county is very pleasant; for there are no lands in the world so well dressed by the hand of man. Kenilworth and Warwick, with their historical associations and the delightful banks of the Avon, are additional attractions to such an excursion.

What I have remarked in respect to Warwickshire applies equally to the neighboring counties of Worcester and Leicester. The valley of the Avon runs into Worcestershire, carrying along with it the same beauty and fruitfulness. Leicestershire is perhaps richer still. This county is famous for the Stilton cheese and for the farm of Dishley Grange, once occupied by Bakewell, from whence emanated the great principle of the transformation in breeds of domestic animals, one of the most valuable conquests of human genius.

Staffordshire affords, probably, one of the most striking examples, in England, of the influence which the vicinity of manufactures exercises on agriculture. This county is not naturally fertile, and mountains, barren and wild, run through it. Owing to the extraordinary progress manufactures are every day making, the population of the county exceeds 600,000 upon an area of 730,000 acres. With such a mass of population the land must be stubborn indeed, which cannot be forced to produce. The potteries and iron foundries produce the immense wealth, which re-acts on agriculture. Large property predominates in Staffordshire, as in all counties, not naturally fertile.

Averse as we are to the relation of landlord and tenant in the United States, one cannot but admire the confidence and kindly relation which exists between landlord and tenant, in England. From generation to generation tenants hold their lands in their own families, under leases that run from year to year, and make great outlays on the lands, and generally refuse a longer lease, when offered to them. In this county, is Drayton Manor, a few years since the residence of Sir Robert Peel. When he carried the repeal of the corn-laws, he caused all his lands to be drained, at his own expense, upon condition that the tenants paid him four per cent. on the outlay, which terms they accepted; and then revised their rents, reducing all such as were not moderate enough, which were few, and offered his farmers long leases. These they refused, preferring the yearly tenantry, under which they had held their lands for generations, in their families. These estates of Sir Robert are the model of good management. The excellent state of the roads and buildings, the levellings and drainage, the good cottages with gardens for the laborers, the most improved implements, the most productive methods, everywhere the best crops and the best cattle, all speak not only of a high state of agriculture, but of a fortune used by the proprietor, as entrusted to his care, to bring forth fruit, under his hands, for the greatest good of the community.

Nottinghamshire is a hilly country bordering on the mountainous. In former times Sherwood Forest covered the greater part of these hills. It was the region of Robin Hood and his exploits. Owing to the sterility and barreness of the soil, it has continued in the possession of a few noblemen, who, for their own enjoyment, have laid it out in fine parks and extensive estates. The district now goes by the name of the Dukeny, from the number of ducal residences it contains. There is not much to interest the agricultural student; though there are some extensive and very expensive systems of irrigation to be seen in the county, and nurseries and plantations of all kinds of trees. In parts where attempts to improve the land have not been attended with success, some noblemen have set about planting regular forests. And it will be ascertained how far these forests, sown and planted by man, composed of selected trees, freed from all parasital vegetation, carefully thinned, will be superior to those natural forests, which have grown up of themselves.

Derbyshire is one of the most picturesque counties of England, and is visited by crowds during the summer. Chatsworth, the magnificent residence of the Duke of Devonshire, is in this county, which everybody has heard of, and which is thrown open to the public with great liberality. One is struck, in its gardens and magnificent park, that, at the owner's expense, it is kept up more for the enjoyment of the public than his own; and that the time will come when no private fortune can stand such expense. The county is mountainous and much devoted to pasture, the rearing of cattle and the making of cheese.

M.

For the New England Farmer.

WHITEWASHING ROOFS.

Having read the inquiries of a correspondent, and the remarks of the editor upon the subject, I offer to "show mine opinion."

Within two years I have reshingled two barns, and several sheds and out-buildings, and have used for the purpose both hemlock and chestnut half-inch boards, cut two feet in length, and laid eleven inches to the weather, unseasoned and fastened with sixpenny nails. Instead of laying by line, I use straight-edged boards, eleven inches wide, and extending the length of the roof. These are kept in place by means of a quarter-inch bit and 40d spikes, two to each board, and the holes are afterwards plugged. With a broom and thick whitewash, in which salt forms an important ingredient, that part of the shingle which lies above the board is saturated. This course is followed with each successive layer of shingles, until the roof is completed, when the whole surface should be brushed over, beginning at the top. If the above method is adopted there is no danger of the evil consequences which attend painted roofs. I see not why the same method will not be of equal advantage where the ordinary shaved or sawed shingles are used.

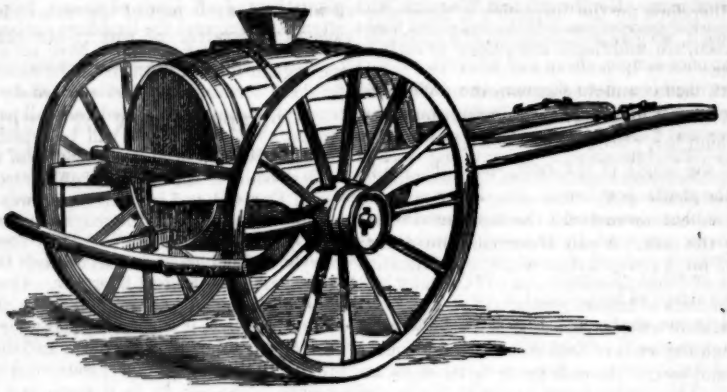
The advantages of whitewashing are—

1. It prevents checking.
2. It prevents the rot in the part which is not exposed to sight; and
3. It prevents the growth of moss on the surface.

I was led to adopt the use of whitewash for the above purpose, by hearing an old mason say, that "where lime mortar had fallen on the roof in topping out a chimney, he had found the shingles that had been thus spattered remaining sound when the rest of the roof was decayed." It is known that in England, timber that is to be exposed to the weather is first saturated in lime-vats.

PHINEHAS FIELD.

East Charlemont, Feb., 1856.



A CART FOR DISTRIBUTING LIQUID MANURE.

For the New England Farmer.

LIQUID MANURE.

MR. EDITOR:—In answer to your Chicopee correspondent, in last week's *Farmer*, I can assure him that I generally find but little difficulty in making rational, thinking, practical farmers in this quarter of the country believe in the doctrine that the fertilizing properties of barn manure are often very much deteriorated, if not entirely destroyed, by exposure but for a few days to the influence of the intense heat and drying winds of this climate, when thinly spread in the common way as a top-dressing for grass lands; and that I have often seen cow manure, in particular, so much reduced in weight from exposure, that it was fit for fuel, and have repeatedly seen poor people in some parts of Europe using it for that purpose, in less than a week after it had been spread out to dry. Now if there can be any great amount of fertilizing matter remaining in it by the time it can be used as a substitute for wood, I should like your Chicopee farmer to inform me where it may be found. That the benefits to be derived to grass from top-dressing, with solid manures of any kind, depend entirely on the quantity of rain that may chance to fall unexpectedly after the dressing has been put on, is a fact established beyond a doubt, and is admitted by every intelligent farmer in this part of the country. And some of these thinking, practical farmers round these parts make from five to seven thousand dollars a year from the produce of their farms, after paying all necessary expenses; and to keep probabilities always in view when one writes—as he says—I would again inform him that with proper apparatus, and a fair field within a reasonable distance of the tank, I will undertake to manure effectually—for one dressing—from six to eight acres of grass land in a day, and not consider myself overtasked, although I have seen nearly sixty summers. If your Chicopee farmer had had faith as a grain of mustard seed in modern improvements, and but a very limited knowledge of practical agriculture, he never could for a moment have doubted the practicability of such plain, simple, every-day operations as that to which he alludes. For his better information, however, on the subject of distributing liquid manure, and that of other farmers of the old school who read your interesting and valuable paper, I herewith send you a representation of *Croskill's Liquid Manure Cart*, in common use in Brittain, and many parts of this country, which you may publish if you please, as it may have a better tendency to dispell doubt on the subject than anything I have time to add at present, being busy in planting operations. At a more convenient season, you may hear from me again concerning this matter. This distribution cart is made of boiler plate iron, and holds two hundred and fifty gallons. It is provided with a perforated partition, which adds to the strength, and prevents a sudden surge in passing over uneven ground. The improved spread board is adapted to watering broad-cast, either level or unlevel lands; and by a simple, mechanical contrivance, the liquid is regulated to spread equally on the surface, and has an apparatus for watering two rows of turnips, any required width. The iron rod is attached to the shaft, and fitted to a brass lever valve, and with this rod, the driver without stopping his horse, can instantly increase or decrease the liquid, as required to manure the land. The pump is fitted into a grooved recess at the end of the cart, and may easily be put in or taken out. Any length of hose may be added to suit convenience. This pump does not choke, even when the liquid is nearly as thick as puddle, which is a matter of considerable importance, although I have not time at present to give a full description of this wonderful machine; but the plate will explain for itself.

T. C.

Beverly, West Beach, May, 1856.

REMARKS.—Our attentive correspondent we trust will excuse us for presenting the reader with an en-

graving somewhat different from the one which he sent us. Although Croskill's Cart is undoubtedly a more perfect machine, it is too complicated and expensive for common use among our farmers of moderate means. While we preserve the engraving of it, therefore, for the inspection of those who desire to see it, we give an illustration of a sprinkler which is at once simple, cheap and efficient.

The cart itself is a mere skeleton, the shafts being about 14 feet long. They are connected by a fore and hind bar, placed at such distance as will just admit the length of the cask, while the width between the shafts is suited to the diameter of it. The axle is bent downward to nearly a semicircle, to receive the cask. A pair of common broad cart wheels are fitted to the axle. The cask is suspended on two straps of hoop-iron, the ends of which are bolted to the shafts, and the same bolts pass also through the ends of two lighter straps which pass *over* and secure the cask firmly in its place.—The funnel or hopper is usually fixed on the top of the cask over the bung-hole, or it may be inserted therein by an attached pipe. The distributor may be made of copper, or wood. The bore should be about two inches, not less, and the length about seven feet, and slightly bent *with a uniform curvature*. The distributor may be attached to the cask by means of a stem of the same material and bore as the main tube, and should enter the end of the cask close to the lower chine.

A stop-cock is frequently put upon the stem, as will be seen in figure 2, to regulate the discharge; but for the entire setting off or on of the supply, the stem opens into a small chamber inside the cask, which chamber is closed by a flap-valve heavily loaded. This valve, when closed, stops the discharge, and, when lifted, the fluid has a free passage to the distributor. The opening of the valve

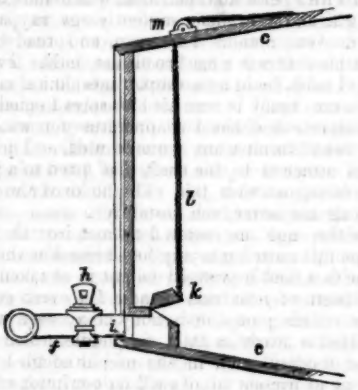


FIGURE 2.

is effected by a small chain attached to the flap, rising to the top of the cask, where it passes over a small roller, and onward to the fore-part of the cart on the right side, where it hangs at hand for the carter to set off or on at pleasure. Figure 2 is a section of a part of the cask, and showing the chamber and valve; *f* is the stem of the distributor, *h* a stop-cock, *i* the chamber, and *k* the valve, which is the common leather flap or clack valve, well loaded with lead, *c c* is part of the cask, *l* the chain attached to the valve, and passing over the roller *m*.

For the New England Farmer.

PREPARATION OF MUCK.

MR. EDITOR:—Your correspondent, "D. T. A.," of Northfield, Vermont, inquires with regard to the proper preparation of muck with ashes, in order to be used as a manure. In replying to him, I would say that the quality of what is called *muck* differs so much in different localities, that no certain rule can be given. The quality of muck differs, materially, from the geological formations in the vicinity. The muck which is formed in that section of Vermont where the rock, in places, is a friable silicious lime-stone, (the calaneo mica slate of Adams,) and is formed over beds of shell marl, is of the best quality, especially if it is from four to ten feet thick above the marl. Mix with such muck two bushels of caustic ashes with a cord, and shovel it over till the ashes is well mixed with every part of the muck, and he will have a good manure for wheat, corn or potatoes, or for a top-dressing for grass. It is ready to be applied just as soon as it is properly mixed. Caustic lime is as good as caustic ashes for this purpose, bushes for bushel. There are other beds in the same geological formations, where no marl occurs. Such beds, if deep, and especially if found in the vicinity of rocks which contain sulphuret of iron, (iron pyrites,) may be nearly as valuable, but will require a greater proportion of lime or ashes, say three bushels to the cord. If there is not an excess of sulphuric acid, such muck will be as valuable as that found above marl, with this addition of ashes. If the muck has been thrown up and exposed to the air, say for a year, before using, a less quantity of ashes will answer.

The muck which is found where the rock is a talcose or chlorite slate, like that in Waterbury, the west part of Northfield, Waitsfield, &c., where the water is soft, is of much less value. When well saturated with the urine of cattle, having been placed in a barn cellar during the winter, or placed in the hog-pen, it is valuable. It is better, when possible, to be thrown out of the bed and exposed to the air for a year, before being put in the barn cellar, yard or hog-pen.

The muck found in those sections of Vermont where the rock is lime-stone and the water is hard, is a species of peat, the growth of a sphagnous plant, and differs from other muck, as much as the timber or other vegetation differs from that found in the tolcose slate region. *Any* vegetable matter may be composted, and made valuable, by mixture with barn manures or alkalies. But the muck in the lime-stone regions is more easily prepared and of greater value than any other. I have a bed on my farm which answers a good purpose, without any preparation, especially for wheat and potatoes. But when prepared by mixing with ashes, at the rate of two bushels of ashes to a cord, it is better than any manure from my barn, and fully equal for corn to that from the hog-pen.

Brownington, Vt., 1856. ORLEANS.

For the New England Farmer.

THE ADVANTAGE OF SIMPLE MACHINES.

What has become of the "Ladies' Department" in the *Monthly Farmer*? Have ladies ceased to write for it? Having always read that part of the *Farmer* with considerable interest, I have several times felt disappointed to find it so reduced, that one-half column of recipes is all each *Monthly* now affords for the farmers' wives. I have never seen any reason why there is not more improvement in the housewife's implements, unless it is because it is not more boldly advocated than it ever has been. Farmers are willing, in many cases, to avail themselves of every newly invented implement or machine that will render their labor easier, and, in many cases, work is executed a great deal better than it could be done in any other way. But how few supply their wives with one of the many improved churns, or butter-working machines. I am sorry to say, that in too many cases, this fault is in the wife, more than the husband, for I believe the generality of Yankees are willing to do all that is in their power to assist their *weaker*, if not *better* half. I have often thought, since living in New Hampshire, how much more labor the farmer's wife might perform in the same length of time, if she would only advocate her cause, and could have the right kind of utensils to work with.

As an example, I will describe the results of one evening's work by two families; one having implements, the other not. The work was sausage filling, in a very comfortable New England farmhouse, where out-doors had the stamp of improvement, but within the style of "old pod augur days" prevailed. Although the wife could have everything she wished for, without one murmuring word, yet she was willing to live and die in the same old track that her great-grand-parents had trodden, so that any improvement seemed like innovation.

It was late in the fall, when the evenings were long, that two pails full of sausage meat were brought into the kitchen, and set on a small table, with two brown earthen pans. Then each member of the family, five in number, gathered around it, prepared with a small piece of basket stuff, bent together in the form of a loop, and tied with a string; over this, they drew one end of the skin, and commenced putting the meat in with their fingers, which crowded in as much air as meat. In this way they worked the whole evening, and thought they did well to finish by nine o'clock. The other house was in Canada West, where men do not live up to the times in improvements. Their farms are generally large, and consequently the housewife's time is in greater demand. It was evening, and a large fire was on the hearth, near which stood two brass kettles, scoured almost bright enough to see one's face in, each holding about five pails full of sausage meat, ready for use. Presently, a pale woman entered, and a younger brother, who is the picture of health. The table was moved out from the wall, on which lay an instrument known as a *sausage stuffer*, and one of the kettles brought to the side of it. Near by, stood a pail of skins. The woman then drew a whole skin on the machine, turned it up, and the young man dipped in about two quarts of the meat, then placing the wooden part of the stuffer into the mouth of it, and pressing against it, the whole was forced into the skin. The process was repeated, until all were filled. A child stood near with a darning needle to open any of the places that contained air. In this way, those two persons and child used up nine or ten pailfuls of sausage meat by nine o'clock.

Now if this little instrument diminishes labor, as this experiment shows, it also saves time. I do not think the cost of this simple machine is more than 75 cts.; but a much improved kind can be bought at the Quincy Hall Warehouse, Boston, which costs several dollars. I have not written this from any invidious motives. I would not be understood to say that there are no "sausage fillers" used in this section of the country, for I doubt not many a New England housewife *does* use one, and that she also adopts many improvements upon the old system. I have made these remarks merely to show the advantage of having proper utensils to work with. ONE THAT LOVES IMPROVEMENT.

REMARKS.—We like the suggestions of our fair correspondent, and hope to hear from her again. But the "Ladies' Department" is from "A to Ezzard," in the *Monthly Farmer*. We take it for granted that all our farmers' wives and daughters are strong-minded, intelligent, discriminating women, and that whatever is useful to them, they will select and "inwardly digest," no matter what head it may come under.

SLAVERY IN BRAZIL.

Trucks in every variety are now numerous. Some recent ones are as heavily built and ironed as brewers' drays, which they resemble, furnished with winches in front to raise heavy goods. Each is of itself sufficient for any animal below an elephant to draw; and yet loads varying from half a ton to a ton are dragged on them by negroes. Two strain at the shafts and one or two push behind, or, what is quite as common, walk by the wheels, and pull down the spokes. It is surprising how their naked feet and legs escape being crushed, the more so as those in front cannot prevent the wheels every now and then sinking into the gutters, and whirling the shafts violently one way or the other. One acts as a foreman, and the way he gives his orders is a caution to the timid. From a settled calm, he in a moment rages like a maniac, and seems ready to tear his associates to pieces.

A slave was chained to one heavy truck. He had been absent when it was wanted, and his enraged owner took this method of preventing him from losing another job. The links of the chain were three-quarter inch round iron.

Neither age nor sex is free from iron shackles. I met this morning a very handsome Mozambique girl with a double-pronged collar on; she could not have been over sixteen. And a few evenings ago, while standing on the balcony of a house in Custom-House Street, a little old negress, four-fifths naked, toddled past, in the middle of the street, with an enormous tub of swill on her head, and secured by a lock and chain to her neck. "Explain that, Mr. C——," I said. "O, she is going to empty slops on the beach, and being probably in the habit of visiting vendas, she is thus prevented, as the offensive vessel would not be admitted. Some slaves have been known to sell their 'barils

for rum, and such are sent to the fountains and to the Praya accoutered as that old woman is."

With a friend I went to Consulado, a department of the Customs having charge over exports. Gangs of slaves came in continually, with coffee for shipment. Every bag is pierced, and a sample withdrawn while on the carrier's head, to determine the quality and duty. The tariff, based on the market price, is regulated every Saturday.

Every gang of coffee-carriers has a leader, who commonly shakes a rattle, to the music of which his associates behind him chant. The load weighing 160 lbs., rests on the head and shoulders, the body is inclined forward, and the pace is a trot, or half run. Most are stout and athletic, but a few are so small and so slightly made that one wonders how they manage to keep up with the rest. The average life of a coffee-carrier does not exceed ten years. In that time the work ruptures and kills them. They have so much a bag, and what they earn over the sum daily required by their owners they keep. Except four or five, whose sole dress was short canvass skirts without sleeves, all were naked from the waist upward, and from the knee below; a few had on nothing but a towel round the loins. Their rich chocolate skins shone in the sun. On returning, some kept up their previous chant, and ran as if enjoying the toil; others went more leisurely, and among them, some noble-looking fellows stepped with much natural grace.

A gang of fourteen slaves came past with enormously wide but shallow baskets on their heads. They were unloading a barge of *sea-coal*, and conveying it to a foundry or forge. The weight each bore appeared equal to that of a bag of coffee (160 lbs.) This mode of transporting coal has one advantage over ours, since the material is taken directly from the vessel to the place where it is consumed. As with the coal, so with every thing; when an article is once mounted on the head of a negro, it is only removed at the place where it is to remain.

A couple of slaves followed the coal-carriers, each perspiring under a pair of the largest sized blacksmith bellows—a load for a horse and cart, with us. A week ago I stood to observe eight oxen drag an ordinary wagon-load of building-stone for the Capuchins up the steep Castle hill; it was straining work for them to ascend a few rods at a time; to-day I noticed a similar load of stone discharged at the foot of the ascent, and borne up on negroes' heads.

No wonder that slaves shockingly crippled in their lower limbs, are so numerous. There waddled before me, in a manner distressing to behold, a man whose thighs and legs curved so far outward that his trunk was not over fifteen inches from the ground. It appeared sufficiently heavy, without the loaded basket on his head, to snap the osseous stem and drop between his feet. I observed another whose knees crossed each other, and his feet preternaturally apart, as if superincumbent loads had pushed his knees in instead of out. The lamplighter of the Cattete district exhibits another variety. His body is settled low down, his feet are drawn both to one side, so that his legs are parallel at an angle of thirty degrees. The heads of Africans are hard, their necks strong, and both, being perpendicular to the loads they are called to support, are seldom injured. It is the lower parts of the moving columns, where the weights are alternately thrown on and off the jointed thighs and legs, that are the weakest. These necessarily are the first to give way under excessive burdens; and here are examples of their having yielded and broken down in every direction.—*Ewbank's Life in Brazil.*

THE SOIL—FOOD OF PLANTS.

The sustenance of vegetables, their habits and modes of existence, constitutes the subject of one of the most remarkable works to which the present age has given birth. We allude to that of LIEBIG on "Organic Chemistry, applied to the Science and Art of Agriculture." The path which this distinguished philosopher has travelled with so much honor to himself, and such lasting benefit to his fellow-men, had been partially explored by his predecessors, who had investigated the nature of plants and soils, but the results of their labors and experiments were isolated and detached, and when collected, seemed, from their very nature, and the manner in which they had been obtained to perplex rather than enlighten. From these, with true German ingenuity and genius, LIEBIG has constructed a rational and comprehensive theory of vegetable life,—one that effectually lifts the soil from the hitherto concealed and inscrutable features of the mysterious, and lays bare to the comprehension of the most irrecondite student, the mechanism of that system, the operations of which are at once so beautiful and so august.

From LIEBIG, JOHNSTON, SPRENGEL, and others, who have entered of late with so much zeal upon the important subject, we ascertain a multitude of facts of the utmost practical importance in the prosecution of agricultural enterprises; for instance, that all soils contain a certain proportion of organic matter, chiefly of vegetable origin, though in some cases mixed with animal organizations; that this matter is combustible, and, consequently, is destroyed by fire; that in some soils this combustible matter often amounts to fifty or sixty per cent. of the entire weight, while in others, less than one per cent. is recognizable; that in all combustible soils, or those which are endued in an ordinary degree with the capacity of vegetable reproduction, the actually combustible portions consist of from ten to twelve different mineral constituents; that the absence of one or more of these constituents, renders the soil to a certain extent infructuous, and incapable of producing affluent, or even ordinary crops; that to such soils as are characterized by this deficiency, the constituents wanting to perfect the equilibrium or adjust the balance of elements, may be artificially supplied; that the excess of some of these principles, is, oftentimes, productive sterility, and must consequently be counteracted or removed, before the cultivator can reduce them to a profitable condition, and secure from them an adequate remuneration for his toil.

It has also been demonstrated, that in every plant produced on the earth's surface, a certain amount of inorganic matter is detectable; such, for instance, as silica, lime, potash, soda, magnesia, &c., and that in every system of manuring and cultivation, substances containing these elementary matters must be supplied to the soil in order to counteract the weakening effects of vegetation by returning to it the energizing principles requisite to the sustenance and perfection of the crops it is required to produce.

Were a soil to be cropped for a series of three or more years without the application of manure, it would become exhausted, cease to produce, and be ultimately rendered utterly sterile and waste.—By comprehending the nature of soils and plants, these men have been enabled to prepare rules for regulating the operations of the farmer, in cases where, before, he was likely to rely wholly upon hearsay knowledge for direction.

For the New England Farmer.

SWEET POTATOES.

Sweet potato is a name we now hear everywhere. Carolina was the epithet generally employed among us, twenty years ago, to designate the wholesome root. It was then considered more of a luxury, and was scarcely seen beyond the tables of the rich. As its use has become more common, and its cultivation extended into higher latitudes, it has taken the name, that, without consulting dictionaries, the generality of people would naturally give it. I recollect the time, when the ruralist could scarcely ever procure this potato without sending expressly for it to the markets of the city. In vain would one inquire for it at the village store. It was rarely kept there.

The sweet potato, (*convolvulus batatas,*) is indigenous to warm climates. Like many other tropical things, I believe it is better flavored, raised within the precincts of its true home. I say this, not merely from conjecture, but after having tested the difference, by eating some at tables of husbandmen dwelling on the banks of the Tombigbee, and in my own native State.

It was imported into England from the Indies by the way of Spain, before the Irish potato was known there, and was in those days supposed to possess the qualities of restoring decayed vigor to the human frame; and consequently more frequently found in the shop of the confectioner than in the larder of the cook. The kissing comfits of Falstaff, and such like confections, were principally made of batatas and eringo roots. It seems at its first introduction into England, to have held forth no inducement to the cultivator. In the days of Evylin, it was, as an edible, in such *bad repute*, that he, in his work on gardening, as early as the year 1699, recommends that these potatoes should be planted in the worst ground. It grows in Spain and the Canary Islands, and one variety has been cultivated with success in the neighborhood of Paris. Time has shown that England's climate, at least, has proved uncongenial to improvements of any consequence respecting its out-door culture. The mists and rains about London are proverbial. Such extreme humidity is very unfavorable to the growth of this root.

In our own country, it used to be cultivated almost altogether in the southern States. It has been gradually advancing northward, till it is now raised of excellent quality, in the vicinity of Philadelphia. It is the opinion of some, that, by acclimation, it may become a profitable crop in certain districts of this State. While on a visit one autumn, at a farmer's in Groton, I ate some quite good ones, just dug from ground bordering the southern side of a fence. It is said they are cultivated in Plymouth county, quite equal in quality to those which come to us from New Jersey and Virginia. An article in the *Ploughman*, about two years ago, says: "The soil in Massachusetts is not generally adapted to the growth of this plant. But there are strips of interval, and here and there patches of warm, sandy land, which well-manured, would yield an abundant crop, much larger than is ever realized from the common potato. Its eating quality, raised on sueh land, is averred, by those who have tried the experiment in this State, to be equal to the best Jerseys." An editor of a certain agricultural paper says, referring to the cultivation of this nutritious root for fodder, "The late Mr. Lowell, of Roxbury, succeeded in raising them, and if we rightly recollect, he thought he could raise about as many on an acre, and as certainly as he could raise the Irish potato. If this can be done, their fattening power will be found much superior to that of the common potato." For several years past, I have been making trials in respect to cultivating them upon my own grounds. As to quality, I have never succeeded to satisfaction. In size I had one season about two bushels of them surpassing any Jersey ones seen at Faneuil Hall Market, or in the provision stores. Were my soil as warm, light and sandy as in some towns of the State, I believe, in suitable seasons, I could have them sufficiently good in quality for all culinary purposes.

Sweet potatoes are excellent for fodder. During my sojourn in Mississippi, I found them much used there for this purpose. Cattle and horses never refuse them. An abundance of them, rejected as to table use, was given to my stock last winter. The horses, especially, preferred them to anything else.

When dried in a brick oven, it is said they furnish the material for making a delightful and wholesome beverage in the shape of potato beer.

Southerners used to tell us there were twenty-four ways for cooking the sweet potato. It may be baked, boiled, fried, made into custards, puddings, pies, cakes, &c. I have eaten loaf-bread, having intermixed with the flower or meal a certain quantity of potato. Sometimes I have seen it made into a biscuit for breakfast, or a sort of hoe-cake for tea. It has been the chief ingredient of some of the best puddings I ever tasted. Pies may be made much in the same manner as squash or rhubarb. Sometimes the tender green shoots are boiled and eaten.

"The vine and leaf," says one, "somewhat resemble a bean trailing over the ground. Perhaps it still more resembles wild buckwheat, though its leaf is larger, and a yellower green." Another says:—"In its general appearance, when growing, the plant resembles the *convolvulus purpurea*, common morning glory, though of course not a climber, like the latter."

In this vicinity, it may be propagated by placing the seed-tubers (large ones I think are preferable,) lengthwise, end to end, across an ordinary hot-bed, in rows a small distance apart, covering them about two or three inches deep with mellow loam. In a fortnight, or thereabouts, each tuber will begin to throw up sprouts, ranging in number from five to thirty, close to the side of the potato deposited in the hot-bed. These sprouts, on attaining the length of three to five inches, are of suitable size for transplanting into the field. Care should be taken to break the sprouts off close to the parent, so as to keep some of the fibres upon them. If the potatoes are not too roughly handled, they will give a second and even a third crop of sprouts. In order that they may not be checked for a second crop, some prefer to break off the earliest sprouts in the ground. Mr. Goodrich says he has always found it safe to take the tuber quite out of the ground, while breaking off the sprouts. In such a case, they must, of course, be immediately replaced in the bed, and covered as before.

When the sprouts are nearly ready, have the ground, which should be of a warm, sandy, mellow, deep nature, plowed into ridges, [in our hot, dry summers, ridging is hardly necessary—ED.] say 4 feet apart, and 12 to 15 inches high; or if preferred, into rows equidistant, 3 feet apart, so as to admit of cultivation both ways. The ground should be thoroughly pulverized and made as light as possible. Heavy manuring is perhaps unadvisable. A manure is needed, such as shall keep up the lightness of the soil, and enable it to hold a good heart. I would have it well-rotted, and thrown on broadcast.

I think it useless to attempt to grow this crop in compact, moist, rich soils. Except in a very dry, or warm season, the crop in such cases, is sure to suffer by an overgrowth of vines, with watery tubers. Set the sprouts, in making choice of ridge-culture, about 18 inches apart, inserting them in the soil in the same manner as cabbage plants. It is better to plant in a dry time, than when the earth is soaked with rain, for when the ground becomes dry, it will be apt to bake, and check the growth of the sprouts. Transplant them only in the latter part of the day. Water them sparingly with water of a moderate temperature. There should be occasional plowings, as long as the extent of the vines will allow it. No dirt should be thrown on the vines. In hoeing, never throw the vines into a cluster, about the top of the hill, it will hinder the sun from giving warmth to it to the extent desirable. The vines often make eight feet or more, in length, in a rich and moist soil, which is some longer than they need be, in order to have fine tubers. Some individuals nip the ends, in order to check the luxuriant growth. I have heard of it being recommended to keep them shortened in a foot till the first of August, and then allow them to take their own course. A New Jersey farmer recently declared to me it made no difference whether they were shortened or not. Roots are frequently thown down at intervals along the trailing vines, which are apt to produce small tubers at the points. I have heard different opinions expressed as to the results of allowing the vines to fasten themselves beyond the immediate centre of the hill. I think shortening in is of no advantage, and that loosening may have its uses, according to the richness of the soil and the moisture of the weather.

The tubers almost always stand up vertically in the soil, instead of lying horizontally, as in the case of the common potato. I advise to dig before the first frost. If the vines are frosted, the potatoes, it is said, become watery, and will not keep any length of time. If it is not convenient to remove the tubers from the ground previous to the early frost, their separation from the vines may be effected by passing a sharp knife between, just above the surface of the ground.

In preserving these potatoes for winter use, they must always be kept unexposed to the atmosphere, in a dry place, where a pretty uniform temperature can be maintained, the safest range being between 50 to 60 degrees Fah. They should never be allowed to become sweaty. F——s.

For the New England Farmer.

MUCK AND PEAT.

Much is said of these for manure. I have used them in various ways, and find some equal to a rich compost, and some inferior to poor, sandy loam. It depends wholly on what they are made of, whether forest leaves, receiving the wash of rich fields, where the dung has been spread or lain all winter in heaps, or the wash of much travelled roads, or a poor bottomless pond hole.

Much is said of bones being dissolved by ashes or horse-dung; when pounded or ground to one-half inch pieces, and covered close in a heap with ashes, and not so that they will heat, they will dissolve, and if well covered with loam to save the ammonia, they are what is wanted. Much is said of sprinkling potato vines with ashes to kill the bug that causes the rot; but if there are ashes and lime enough in the ground, and good seed are planted, there will be good potatoes and no rot, either in potatoes or grapes.

I prepared a four acre lot (which had been entirely worn out,) with leached ashes, which contained lime, forty years ago, and have used ashes and bone dust occasionally, since. Potatoes have been planted on some part of it every year, and they have been invariably sound and good.

If a man will prosper in business, he must pay his debts, and if he would prosper in agriculture, he must put back something of the same nature which he has taken from a good soil. Exchanges of views are important; excuse this, and I have done.

Can you inform me what is the composition of Babbitt's grafting wax; you will oblige me by so doing. Yours very respectfully, PHINEAS PRATT.

REMARKS.—We do not know the composition of Babbitt's grafting wax.

CARROTS FOR HORSES.—Our horses are now feasting on orange carrots. Since we began feeding these they will not eat corn—it will remain all the day untouched in feeding troughs or boxes. Theorize and calculate as we may as to the greater expense of roots over Indian corn, and the greater quantity of nutritive value per acre of the latter, yet every farmer who has had experience with roots, must admit that they are indispensable for the preservation of the animal's health during the season of dry-feeding.

For the New England Farmer.

MANAGEMENT OF BEES.

MR. EDITOR:—I have read with pleasure several articles in the *Farmer* relative to the management of bees in winter, but no inducements to adopt any system are laid down. I am somewhat engaged in the culture of honey and the honey bee, and thus far have been very successful; yet there are drawbacks which require attention, which we can obviate if we will. I object to putting bees in a cellar, packing them in straw, and also burying in the ground. In the first place, a damp situation would sooner or later prove downright ruin to them, as it would be very likely to mould their combs and cause disease and death; I should as soon think of wintering a family of children in a cellar and having them come out healthy in the spring as, I would a swarm of bees. Packing them in straw is also wrong, as you must necessarily stop a free circulation of pure air, which is so essential to all animal life. The method of burying them in the ground, is, if possible, worse than either of the above, for a closer confinement and consequently a greater degree of dampness must prevail. I believe that under ordinary circumstances six swarms out of eight would either die or be worthless the first season, if buried in the ground. A swarm reduced from four thousand to two or three hundred would be almost worthless.

The method which I practice has been successful, never having lost a swarm either in winter or spring. My hives are twelve inches square inside, with an opening in front and rear for egress and ingress, three inches long and half an inch high, with a seven by nine glass inserted in the rear for the purpose of witnessing their operations, and ascertaining if they have a sufficient supply of honey for winter use, &c.; the glass to be covered by a door that can be opened and shut at pleasure.—About the first of December, the hive should be placed down closely upon the bottom board, with the front and rear entrance opened for a free circulation of pure air, which is indispensable. I now place the hive in a dark, unoccupied room, that is rather cold; even if the thermometer should run to ten or fifteen degrees below the freezing point it would do no harm, and should be kept at as even a temperature as possible. In this condition a swarm of bees will consume ten or twelve pounds of honey less than they would were they exposed to the rays of the sun. In the course of the winter, I occasionally open the doors in the rear of the hives to ascertain their condition, being careful to keep the frost and ice out of the entrances.

When sufficiently warm, say the last of March, they may be taken from the room and placed upon the bee-stand where they are to be kept for the summer, and if the weather be favorable, and the bees wish to issue out, I open the door in the rear of the hive for the purpose of letting in the light, being careful not to let any of the bees out until the door has been opened at least twenty-four hours, and by so doing I prevent them being blinded by the rays of the sun, especially when there is snow on the ground. Having practised the above system, I feel assured that there is no safer way, and feel confident that should any feel disposed to follow my directions, they would not fail of success.

My spring management is somewhat different; having them now placed upon the stand, I close the rear entrance perfectly tight to stop the current of air under them, at the same time letting the rays of the sun strike fully upon the hives to assist in creating a sufficient degree of heat to propagate the eggs and larva, and at the same time ascertain if possible if there is a supply of honey; if not sure there is enough, feed with a little honey or syrup, and they will repay as many dollars as cents are paid for the trouble. Z. VINTON.

East Bethel, Vt., April, 1856.

EXTRACTS AND REPLIES.

FATALITY AMONG LAMBS.

MR. EDITOR:—I wish to say a word in relation to a singular fatality among lambs in this vicinity, which, if it extensively prevails, as I think it does, will have a disastrous effect on the wool and mutton interest in Vt. I had about thirty ewes with lamb this spring, all in good condition, and the finest grade. The lambs began to come about the first of May, and down to this time, the 16th, I have but one lamb living, though I have had about twenty in all. It makes no difference whether they come in stormy or fair weather, it is all the same; they come into the world with just a breath of life in their body, and will live from half an hour to twenty-four. I could scarce get them to swallow any milk, and only two have ever stood on their feet.

Some farmers are able to raise most of their lambs, but all complain that they are very hard to raise, and some are as bad off as myself.

My sheep have not run among beechnuts this spring. Some say the trouble is caused by our cold winter. If you or any of your subscribers can give us any good reason for the lambs dying, I should be very thankful for the same.

CHARLES S. PAINE.

East Bethel, Vt., May 16th, 1856.

—

COW POISONED.

FRIEND FARMER:—On Saturday last, Mr. Joseph Cline, of this town, lost a very nice cow, poisoned by eating what we call Indian poke, or swamp cabbage. It grows in wet, swampy land, and has been used to soak corn in to poison crows, and is sure to accomplish the object.

Derry, N. H., 1856. W. N. WILKINSON.

—

BOUND VOLUMES.

G. F. H., *St. Albans, Vt.*—We can supply all the previous volumes of the *Farmer*, perfect, with the exception of the March number of vol. 6. Price $1 25 a volume. The transactions of the Agricultural Societies of Mass., for 1855, are not yet published.

—

WATER PIPES.

D. PRATT, *Deep River*, in reply to inquiries about water pipes, states that block tin is used in that region, and found convenient and profitable.

—

LAUSON TAYLOR, *Sutton*.—We have not the book you mention, but will publish a table on the subject you mention when we can find or prepare one.

CATERPILLARS—STRIPED SQUIRREL.

MR. FARMER:—There seems to be various methods of destroying the caterpillar. "C." recommends to blow them off with gunpowder. W. G. Lewis feeds them with spirits of turpentine; others burn them with birch-bark torch, and I have seen one man shower them with soap-suds; but the best method I ever could find, is to take a dry mullein and poke it into the nest, then roll it in the fingers and wind them up in their own web and crush them under the feet. What few remain may be destroyed with the mullein, by sawing back and forth.

To prevent the striped squirrel digging up corn, feed them. They are like some bipeds we have seen, they will never dig, if they can possibly get a living without. Take shelled corn, and scatter into the cavities of the stone wall, or in the corners of the fence around the field, three or four quarts will be sufficient for a large field. I have tried it for many years, with complete success. H. BRIGGS.

Fairhaven, Vt.

—

RHODE ISLAND GREENING APPLE.

In answer to a subscriber's inquiry in Duxbury, about the Rhode Island Greening, I would say, your trees have probably too much top, so that there is not sap enough to nourish the tree and carry out the fruit to perfection. Apply more dressing after pruning, in the form of barn manure, oyster shells, lime, leached ashes, or if the ground be dry, chip dung; wash the trees occasionally with strong soft soap-suds, and keep the soil loose around them by plowing or digging around for some distance.

Deerfield Centre. JAMES PRESCOTT.

—

GIFFORD MORGAN HORSE.

Is there a horse known as the "Gifford Morgan," if so, by whom owned, and where kept, and what is his pedigree. J. W. A.

REMARKS.—There is, or has been a horse by the above name—but we can give no account of him. Brother HOWARD, of the *Cultivator*, will be likely to know.

—

WATER CEMENT FOR ROOFS.

I wish to know through you, or of those who may have tried it, if common water cement will make a tight and durable covering on a flat roof—too flat for shingles to turn water well? Will it stand heat and frost without cracking? If so how should it be applied?

If you or some of your correspondents will answer the above questions, you will oblige a

Henniker, 1856. FARMER.

REMARKS.—The common water or hydraulic cement will not stand frost—that is, when the cement is subjected to water and frost.

—

MICHAEL, *Bangor, Me.*—Your article on "Banking up Houses," contains valuable suggestions. We shall reserve it for a more seasonable period.

—

WM. L, *Green, Me.*—We can give you no reliable information of the fertilizer or churn, which you inquire about.

CULTURE OF MILLET.

What kind of seed is the best to sow for fodder, and when is the best time to sow it? Will it do to sow it on stubble, or what kind of land will be best for it, the time to cut it, &c.? A SUBSCRIBER.

Milford, Ct.

REMARKS.—There are two kinds of millet, the Turkish, and our common seed. The seed of the former resembles canary seed. We have never seen the plants growing. Should advise to sow our own. Any land suitable for corn or wheat will produce good millet. Sow about the first of June. Cut when just out of blossom.

—

POWDER-POST IN TIMBER.

MR. BROWN:—I wish to inquire the reason of walnut and white oak timber becoming powder-posted in the sap part of the timber at a certain stage of seasoning? Can you give a remedy?

Amherst, 1856. A. B.

—

FISH AS A MANURE.

H. W. T., *Taunton.*—We should not think alewives at fifty cents per hundred and hauled four miles, would make a profitable manure. See article on the subject of fish manure in the April number of the *Monthly Farmer* for the present year, 1856.

—

NEW BUILDING MATERIAL.

To G. B. S., *Uxbridge, Mass.*—Fowler & Wells, N. Y. city, have published a little work entitled "A Home for All," which gives a good deal of information on the subject of building with concrete.

For the New England Farmer.

CORN MEAL AND FLOUR.

Did W. H. H. suppose he was at work upon me, or my fellow townsman, J. R.? Because it is a serious matter and no small honor to be noticed in a public journal; and until the "hash is settled," we, J. R. and myself, shall have a bone to pick between us. Having pointed out your correspondent's oversight, I will proceed to comment upon those portions of his communication that refer to me, and peradventure I may touch upon matter strictly concerning him and J. R., for which I shall have to crave the pardon of both, inasmuch as I am unable, at this time, to discern definitely wherein W. H. H.'s account with me lies. First, he wishes to know "why corn meal, containing two per cent. more gluten than wheat, will not make an adhesive dough? He had supposed that corn meal was deficient in gluten, partly because Dr. Pereira had said so," and partly for some reason which he omits to mention, but which I surmise to be this, viz.: because it would not make an adhesive dough. He supposed that inasmuch as gluten was known to possess powerful adhesive qualities—it being used on self-sealing envelopes, &c.—therefore the meal that contained it largely, ought to make an adhesive dough, but as corn meal did not do this, he concluded that it was "deficient in gluten." "Perhaps, however," he adds, "the good Dr. may be mistaken," a well timed and sensible ob-

servation truly. I have not Dr. P.'s work at hand, but Prof. Johnston says, as I stated in my first communication, that corn meal contains two per cent. *more* gluten than wheat flour. If these acknowledged authorities "agree to disagree," I shall agree not to interfere. But supposing Prof. J. to be right, and that meal contains more gluten than flour, and yet makes a less adhesive dough may not the anomaly be explained in whole, or in part, by the facts, first that meal is much coarser, and second, that it contains six, and sometimes seven per cent. more fat than flour? This is my answer to his first question.

Next he inquires, do one hundred barrels of fine wheat flour contain more or less nutritious matter than the same weight of oat or corn meal? My authority for saying *less* is Prof. Johnston, (vide Chemistry of Common Life, vol. 1, p. 86.) The last of his inquiries that I shall notice is, whether it is true that the "potato-eating Irish" have fair, round bellies? "Honest Mike Fagan, of Tipperary, avers that it is not true." Prof. Johnston says as follows: "The Hindoo who lives on rice, the negro who lives on the plantain, and the Irishman who lives exclusively on the potato, are all described as being more or less pot-bellied," (vide Chem. Com. Life, vol. 1, p. 99.) The reason of this is, that a given amount of starch—the substance that enters most largely into the composition of the potato—contains much less solid nutriment than the same amount of gluten, and consequently a larger quantity of starch must be eaten to supply the same amount of nutriment that may be obtained from a much smaller bulk of gluten. And the admission, in large quantities, of a substance so light and porous as starch into the stomach, would, it seems to me, have a decided tendency to enlarge that organ, and confer upon the individual a somewhat corpulent habit. However, the controversy lies between Michael and the distinguished chemist to whom I have twice alluded. Your correspondent's remaining remarks and inquiries I leave to J. R. to answer as he sees fit. The subjects to which they refer he is eminently qualified to elucidate. With one inquiry, I bid my friend, W. H. H., adieu. What does he understand by "tissue forming material," gluten alone, or gluten combined with starch and fat? J. B. R.

Concord, April 7, 1856.

SOURS OR ACIDS.

The sourness of the juice of a lemon and the acidity of vinegar are so well known that the mere mention of them is sufficient to convey a knowledge of the chief qualities of sours or acids in their natural state. There are so many acids that two or three pages of an index to a chemical book are taken up in enumerating them. Every fruit contains an acid; nearly all the metals are capable of forming acids. When coal, wood, paper, rag, charcoal, brimstone, phosphorus, and many other substances, are burned, acids are produced. A flint stone is an acid. There is an acid in our window glass, and in many of the most costly precious stones. The air we breathe contains an acid. We create an acid in the lungs by the act of breathing. By a very slight change sugar can be converted into oxalic acid, which is a strong poison. Sugar, by another change, is converted into vinegar. These two illustrations show that a sweet can be converted into a sour; but when sour fruit becomes sweet it proves almost to demonstration that a sour can become a sweet acid.

The most powerful acid is that derived from burning sulphur—it is called sulphuric acid, and is one of the most important articles of manufacture. Its acidity is so great that a tea-spoonful is sufficient to make a pailful of water quite sour. Nitric acid, obtained from nitre or salt-petre, is of the next importance in the arts; it is so corrosive that it has long been distinguished by the name of *aqua fortis*, that is, strong water—strong, sure enough, for a nodule of iron, lead, or silver, dissolves in it like sugar placed in water. From the number of acids which we find in nature, and the tendency of many artificial substances to become sour, it is evident that acids and sours are essential to our life and well being. Acids assume all forms and colors; some are liquids, some gaseous, others solid. The acids of fruits, when separated from the grosser particles that accompany them, are very beautiful and crystalizable substances. By the ingenuity of the chemist, the sour of unripe apples, grapes, tamarinds, lemons, &c., may be crystalized into beautiful snow-white bodies, which, however, when touched by the tongue, at once indicate their origin by their flavor.—SEPTIMUS PIESSE, *in Scientific American.*

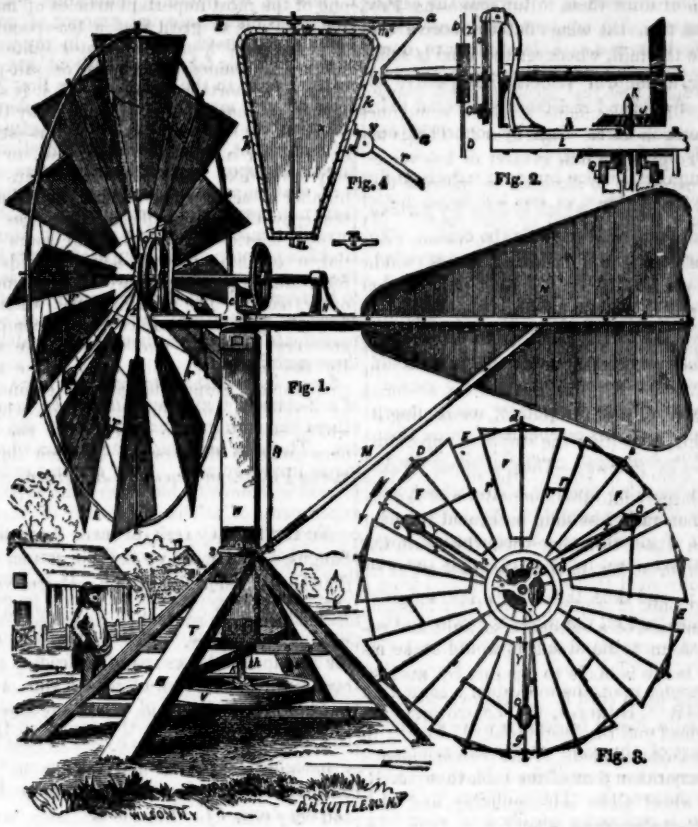
TO DESTROY CATERPILLARS.—A gentleman from Saugus, whose name we have forgotten, informs us that he has found the use of molasses very effectual in destroying caterpillars; that when they are in the nest he has smeared it over with molasses, and that none have ever escaped from it; that they cannot travel over a limb where the molasses has touched, and that it does not in any way injure the tree, and that upon the whole, he likes it better than lighted torches, gunpowder, soap-suds, whale oil soap, or even the thumb and finger! A cheap and easy remedy. Let the molasses "work."

APPLES WITHOUT BLOSSOM.—The following was sent us by a lady in Norwich, Vt., now at the advanced age of eighty-four years. It is written with her own hand, which is as clear and legible as the print you are now reading.

At Barre, Massachusetts, I saw two apple trees which never blossomed, but bore good sized, fair apples. I inquired into the philosophy of it, and was told it was by reversing the scion when grafted.

M. D. R.

PARSNIPS FOR STOCK.—The *Prairie Farmer* of March 27th, in a valuable article on the Parsnip, says:—It is excellent as food for horses, cattle and swine. It is more nutritious than the carrot. The winter butter from the cows of Jersey and Guernsey, fed on the parsnip, is almost as rich in flavor and color, as when they are fed in pastures. It bears frost well. If left in the ground all winter, it will be good in the spring. Its ash has 36 per cent. potash. Wood ashes make a good manure for it. It is more hardy, and less liable to disease and to insects than the carrot. It may be sown, says the Albany *Cultivator*, in the fall.



PATENT SELF-REGULATING WIND-MILL.

The wind has been pressed into the service of man on land, as well as on the sea, in many ways. It raised the water to irrigate the lands of the ancients, as well as to winnow their grain and fill their sails. Some interesting relics are left of the windmills of our fathers, erected soon after the settlement at Plymouth. But generally, they have been found somewhat uncontrollable, and liable to be broken in high winds. It is said that the one here represented is cheap and not liable to this objection.

The *Pennsylvania Farm Journal*, from which we take the description, says the accompanying engravings illustrate an improvement for which a patent was granted to Dr. Frank G. Johnson, No. 196 Bridge St., Brooklyn, N. Y., on the 16th of January, 1856.

The invention consists in providing the wings of the machine with weight and springs, which are so arranged as to control the position of the wings, causing them, whenever their velocity is too great, to be more or less turned edgewise to the wind, and *vice versa*. Also in providing the wind wheel with a stop wheel, arranged in such a manner that a slight pressure on the stop wheel has the same effect on the wings as an increased velocity of the wind, thus enabling the wings to be turned edgewise to the wind, and the mill to be thereby stopped at pleasure.

In the engraving fig. 1 is a perspective, and figs. 2, 3, 4, sectional views of the improvements. Similar letters refer to the same parts.

The sliding weights G, figs. 1 and 3, connecting rods, *r*, and spiral springs, Y, constitute the governor or regulating apparatus. When the wheel revolves at its maximum velocity, the weights by centrifugal force are thrown out from the centre, and the extremities of the rods, *r*, drawn closer togeth-

er, which causes the wings to turn edgewise to the wind. The tendency of the mill now is to revolve slower and slower, until the tension of the springs shall overcome the centrifugal force of the weights, which will slip or draw them in towards the centre again, and thus turn the wings flat to receive the wind, and give the mill, whenever the wind is sufficiently strong, a uniform velocity, irrespective of the variation of wind and resistance presented to it. One weight controls three wings, by connecting one to another. To give the mill greater or less velocity it is only necessary to diminish or increase the tension of the springs, Y, which is done by turning the nuts, *n*, out from or in towards the centre. To provide against strong and sudden gusts of wind, the wings are made wider on the back than on the front side of their bearings, so that they will turn back and crowd the weights out from the centre, before the velocity necessary to do the same could be acquired.

The stop-wheel, C, and the rods, Z, connecting it and the weights, constitute the stopping apparatus which, operates as follows:—Thus, suppose brake I (fig. 2) to be pressing upon the stop-wheel, and thus stopping, or rather holding back, said wheel; while the main wheel turns on, then the point, O, would rise to *o*, or as far above the wind-shaft as it is now below it, and thus throw out the weights from G to *g*, and turn all the wings edgewise to the wind, causing them to stand still until the brake is released; the brake is made to operate by means of a weight hung upon cord *h*. This governor and stopping apparatus, it will be seen, revolve with and constitute a part of the wind wheel, and are independent of every other part of the mill, thus making the wind wheel alone self-regulating, and almost stopping in spite of the gale.

By means of the brace M, and collar, S, together with the iron bar, R, the strain of the mill, in its tendency to be blown over, is brought on the bottom of the post or standard as well as on the top. If the mill were sustained by a continuation of the spindle, P, a distance down into the post, the whole mill, by the peculiar action of the wind, would acquire a rocking motion, placing the spindle and post in danger of being broken off, which liability is wholly prevented by the above arrangement.—Rotary motion is transmitted from the wind-wheel to pulley V, by gearing, in the usual manner.

Its parts are simple; they are nearly all made of strong iron, so as to be very durable. Many of the parts are provided with adjusting screws, whereby a proper degree of tension may be secured; the machine may also be taken down, removed, and put up again very easily. These mills are sold at prices ranging from $50 to $800, according to size. For the lowest sum a machine is furnished having about the power, during a pleasant breeze, of one man.

For the New England Farmer.

IMPERFECTIONS.

MR. EDITOR:—Having been a subscriber to your paper for more than one year, I am free to say that I know of no monthly publication which, in my opinion, is doing an equal amount of good. Yet, I would beg leave to say that in my judgment it might be made far better, without any additional cost. I refer to the fact, that the Post Office address of very many of your correspondents is omitted, which to me is a great loss. The cause becomes quite apparent, from the least reflection. Public discussion upon agricultural matters, all agree, is of vast importance, and it is pleasing to know that numerous clubs, or associations, have been formed in most of the New England States for the laudable purpose of diffusing useful knowledge upon this important branch of industry. It is, however, to be regretted that the great majority of those engaged in agricultural pursuits cannot, or do not, participate in the great benefits to be derived from these meetings.

Some, indeed, seem to have so large a "bump" of self-conceit, that they *will not be taught*, while others aim with great care to do as did their fathers. There is, however, a large class who are aiming at improvements. They are not satisfied with present attainments, but regard the experience and experiments of others as worthy of their notice; consequently, they seek to learn by means of the press what others say upon these matters in which they are so deeply interested. It is, however, obvious that few printed communications on agricultural subjects are so explicit as to require no additional explanations. This defect, if it exist, can only be supplied by means of epistolary correspondence through the post-office. Hence, I trust, all will see the importance of having the post-office address clearly attached to the names of those who are contributing so largely to the colums of a work so universally popular and reliable as the *New England Farmer*. SOLOMON STEELE.

Derby Line, Vt., Feb., 1856.

For the New England Farmer

THE PAST WINTER,

AND THE VERMONT CENTRAL RAILROAD.

MR. FARMER:—Some thirty years since a German Duke travelled through a portion of Canada and "the States," and published his two volumes of travels on his return. Of Vermont, he said, "The women of Vermont are very fat, have yellow hair, and all smoke." It seems he passed through Lake Champlain, did not land, and only saw some emigrants on one of our wharves, just from the ould counthrie. This statement is much like your New Hampshire correspondent's, published in your paper of the 3d inst.

In my statement of weather, &c., dated Feb. 11, I said, "The trains on the Central Railroad, from Windsor *on* (printed *over*) Connecticut River to Burlington on Lake Champlain, have not lost a trip, nor have they been delayed so as to be more than fifteen minutes behind making time on this road — *sometimes late caused by non-arrival of trains on connecting roads.*"

The data for this and the Vermont and Canada road was taken at the office of the Central road on

the 10th, and written on the 11th February and sent you. On the 12th, the same night friend Varney was so unfortunate as to be an hour late, we had a slight blow. Still, friend Varney should not have growled at one hour's detention, as had he, the same day, taken the southern route via Bellows Falls, he would have stopped at a farm-house on the mountain, and been, instead of *one, thirty-six* hours behind time, notwithstanding the roads in our valley were all in running order.

A statement of the weather from Feb. 11 to this time would surprise him quite as much as the last, (which I assure him was strictly true,) and convince even so great a traveller as he is, that the valley of Lake Champlain has "presented an exception" to the generally severe past winter. I may soon make compararive tables, and send you.

If friend Varney had seen a fat, yellow-haired woman smoking at St. Albans, and had made the same statement of the women of Vermont that the German Duke did, he would not have been more unfortunate in his conclusions than he has been in the present case. C. GOODRICH.

Burlington, Vt., May 26, 1856.

For the New England Farmer.

THE PROFIT OF FATTENING SWINE.

BY F. HOLBROOK.

In an article in the *Monthly Farmer* for April, 1854, I endeavored to show that swine may be profitably fattened in New England; and in the *Farmer* for May, 1854, and again in that for July, 1855, I gave the results of experiments in feeding pigs, instituted for the purpose of testing the soundness of the views advanced in my first article. Since writing those papers, I have made yet another trial of the cost and profit of feeding, and will now give the details.

On the 2d of January, 1856, I commenced feeding five lean shoats, weighing respectively, 80, 77, 70, 66 and 61 lbs., or, in all, 354 lbs., gross weight. They were placed in apartments consisting of a compost pen, about 10 feet wide, by 14 feet long, and an eating-room connected therewith. The litter made by two horses was daily thrown into the pen; scrapings from the woods, consisting of leaves, decayed sticks and rich mould, were occasionally added, say two loads or a cord once a fortnight; and clean straw was frequently given to the pigs, which they arranged in the pen, for bedding, to suit themselves. It was quite an advantage to have the pigs make their bed in the compost heap, as the pen not being very large, the whole heap was influenced by the heat generated by the pigs while lying in their bed, so that it did not freeze deeply, even in the coldest weather. The litter from the horses also contributed to keep out frost.

As in the experiments heretofore made, so also in this, the pigs were fed on corn and cob meal,—the rule being to give them all they would eat with a good appetite, and keep the trough clean. Immediately after feeding them at a given time, the meal for the next feeding was placed in the bucket, hot water poured on to scald it, and the wash of the kitchen afterwards added, the mess standing in a warm place the while, to soak and swell. Each grist of ears of corn, when put up to be ground for the pigs, was carefully measured, and at once charged to them, so that all shrinkage from toll taken out or otherwise, was placed to their debit. Entire accuracy was aimed at in keeping the account.

The pigs were thus treated till the 8th of April last, when they were sold to the butcher at 9 cents the pound, dressed,—he charging for the slaughtering. The five weighed, dressed, 785 lbs. They consumed eighty-four bushels of corn and cob, or forty-two bushels of clear corn. During the time of feeding, they were supplied with twelve loads of raw material from the woods, which they pulverized and enriched, and mixed with the litter from the horses and the straw for bedding, making up a compost of the best quality, both as regards material and mode of manufacture.

Corn was worth in January last, in this market, about one dollar and ten cents per bushel; but has been gradually falling in price, till now it is about eighty cents, by the quantity.

The five pigs may be accounted with as follows:

785 lbs. of pork, net, at 9 cents per lb.		$70,65
Deduct 84 bushels corn and cob, or 42 bushels clear corn, at an average price of $1 per bu.	$42,00	
Deduct paid for slaughtering the five	3,75	
Deduct paid for the lean shoats $4 each	20,00	65,75
Balance, above the market value of corn consumed		$4,90
And the pigs have converted 12 loads of raw material into good compost, worth a bushel of corn, or $1 per load		$12,00
From which, if you please, deduct the cost of furnishing material, say 50 cents per load, which is pretty high	6,00	6,00
Profit on the five pigs		$10,90

This is the sixth experiment I have made, to ascertain the cost and profit of fattening swine, and it shows less profit than any other one of the six; and I attribute the smaller return mainly to the extreme and long-continued cold weather of the past winter. Probably, if I had fed these pigs a month longer, so as to have given them the advantages of warmer weather, to lay on fat, the gain in proportion to the corn consumed would have been materially greater than now appears. However, extremely unfavorable as the season was, yet the pigs paid more for the corn consumed, than it could have been sold for in market, by the quantity, and supplied a pile of compost worth more than they get credit for in the account.

Here, in New England, we must use all resources available at a reasonable cost, if we would keep our best lands up to the desirable pitch of fertility, and much more, if we would improve those that have been worn by long and severe cropping, or that never, by nature, had more than a thin hungry soil. The means for the most part employed must be those

afforded by the farm itself. My object, in all these experiments with swine, has been to show to myself and to others, one of the ways in which the products of the farm may be disposed of so as to give them back to it in compost with materials otherwise lying waste or idle, and get as good a price for the crop as though it had been directly exchanged for money. Here is the policy for him who desires to live by farming: so direct the business as to obtain a reasonable return for capital and labor invested, without robbing the soil. He who, eager for a present income, regardless of the future condition of his farm, takes all from it he can get, returning little or nothing back, is not unlike the man in the fable, who fortunately possessing a goose that laid a golden egg every day, was not content with so sure but slow, an income, and thinking to seize a large treasure at once, mangled and tortured the faithful goose, and in the end lost all.

F. HOLBROOK.

Brattleboro', May 27, 1856.

For the New England Farmer.

STONE WATER PIPES.

MR. EDITOR:—In the monthly *Farmer* for May I noticed an inquiry made by H. Morse, of Johnson, Vt., as to the best material to use for conveying water to buildings. Some two years ago, I commenced the manufacture of drain tile in Whately, and the thought occurred to me that a pipe for aqueduct purposes might be made of stone ware, which would be the desideratum, both as regards cost and durability, and not only that, but freedom from deleterious matter, as there is no poisonous substance used in the manufacture of stone ware. The only articles used in its composition are clay, (commonly known as pipe clay,) and salt, which forms the outside glazing, applied when the ware is at a white heat. The inside glazing is composed of common clay. So you see that there can be no objection to the material, so far as that is concerned. I therefore made a quantity of the pipe, in sections of two feet, one end of each having a socket or enlargement to receive the other end of its fellow into it, some two inches or more; this joint is made tight by means of melted brimstone being poured into the space remaining in the socket, thus making a perfectly tight joint. They should be laid below the effects of the frost, or the liability of cattle stepping on them. In that case I do not know of anything that will compare with it for durability or cheapness. The pipe, I have since learned, is manufactured extensively in Ohio, and to some extent in Somerset, in this State. It has been submitted to a test, to ascertain its strength, by A. Stanwood, formerly superintendent of pipes, Cochituate Water-works, and found to sustain a pressure of 300 pounds to the square inch, or greater than a column of water 650 feet high, without injury to the pipe. Messrs. Bemis & McClellan, of Chicopee, have a large quantity laid, and speak of it thus: — "It has been in constant use since it was laid, conveying the water to our entire satisfaction. We have great confidence in its durability, and believe it to be superior to lead or iron; and have given orders for more to take the place of iron."

I regret that there is not some one in this region that would commence the manufacture on a large scale, as I am continually having applications for it. It is out of my line, and I have as much to do at drain tile as I can attend to.

JAMES M. CRAFTS.

Whately, Mass., May 15, 1856.

For the New England Farmer.

WHY SMALL POTATOES ARE BEST.

MR. BROWN:—I have seen much in your excellent paper on the planting of large and small potatoes, as seed for crops. I take neither side in the controversy. If I took either, I should incline to the small potato party, and my reasons for so doing you will see in what follows.

That which vegetates in the potato is the eye.—It would seem, at first sight, likely to make little difference, whether the eye of the larger or smaller potato were used for seed. Indeed, it would seem, that as more of the nutritive matter of the potato surrounds the eye in a large than in a small potato, it would be better to use the large potato than the small one for seed. But herein is the evil which follows the use of the larger potato for this purpose—to wit, the quantity of alimentary matter, in a large potato, is disadvantageous, by promoting too great a development of stems and leaves; while on the other hand, the less alimentary matter in a small potato makes it better for seed to produce good crops than a large one, because it less promotes rankness of stems and leaves.

But still a question remains behind, *why use the potato, large or small, whole, for seed?* Why raise a question between large and small potatoes, brethren of the same family, and each entitled to produce after its kind? When I was a boy, it was the employment of "us boys" to cut the potatoes in the evenings, during planting-time, into sets for planting. I suppose this is done now, not to save seed, but because potatoes, when planted as sets, run less to tops and stems than whole tubers, and produce more than whole tubers. I last year planted a small piece of land with potatoes of fair size, and another piece of land with potatoes cut in sets. My man testified, with Irish vehemence, that the whole potatoes gave stalks and to spare; but that the sets yielded abundantly of *praters*.

But as I am accused of borrowing my wit, without giving the lender credit, (and I confess I do borrow it all, for I came into the world with none, and could never originate any,) I will quote Lindley, no mean authority. After saying that in laying down cuttings of the grape vine, each eye must have a large piece of alburnum attached to it to nourish it, Lindley adds, "The provision of alimentary matter may, however, be, in some case, disadvantageous, by promoting too great a development of stems and leaves, of which the potato itself is an instance. Theoretically, the more nutritive matter there is for the eyes, the greater crop there will be; and so, probably, there is of leaves and stems; and it would seem that whole potatoes should be more advantageous to plant than sets. But I have proved, by a series of numerous experiments, that the weight of potatoes, per acre, is greater, under equal circumstances, from sets than from whole tubers,

by upwards of from seven hundred weight to three tons per acre; and considerably more, on comparison of the clear produce, after deducting the weight of sets, in both cases. In these instances, I supposed the rankness of the vegetation, from the whole tubers, to be the cause of the diminished crop; for the stems were unable to support themselves, and were blown about, laid, and broken by the wind." M.

For the New England Farmer.

LUTHER CARLTON.

Mr. Editor:—Believing the plan which you announced a few weeks since of publishing brief biographical sketches of "men distinguished for their ability and influence in matters pertaining to agriculture," will prove to be one of the most valuable features of your excellent journal, I have written for publication the following notice of the life of this individual, although I have too much regard for his well-known modesty, to claim for him a rank among the "distinguished," in the ordinary sense of that word. Born in the neighborhood in which he lived and died, he passed the quiet and undistinguished life of a country farmer. And it is for this reason, that his example in many respects may be of greater value to those who are struggling with the obstacles and discouragements that he encountered, than it would be had his course been marked by those rare events, or those uncommon qualities, which, falling to the lot of the few, make them prominent, distinguished, famous. The great and the glaring, the uncommon and the rare, have long been the exclusive subjects of the biographer. And were it to be announced to-day that the real object of biography is to excite dissatisfaction with the business of farming and the occupations of every-day-life, and to teach the young to look to trade, speculation, politics, literature and war as the only avenues to wealth and honor, would our books on that subject need any alteration or revision?—Would not their examples be directly to the point? But if biography is to teach the philosophy of common life by examples that shall afford hope and encouragement to the multitude who find its trials and difficulties disheartening, then there must be a radical change. Napoleon made the Life of Alexander his constant companion; the merchant can do the same with the Diary and Correspondence of Amos Lawrence; and the politician may do well, perhaps, to study the history of Talleyrand;—but whose biography affords a model for the young farmer? Where shall he find examples applicable to his sphere, and possible with his means? It cannot be doubted that perseverance, tact, skill, generalship, and all the nobler traits of human nature, are as often displayed on the farm as in the camp, the cabinet or the counting-house. Let it, then, become a part of the duty of agricultural papers to furnish these examples; and until the attractions of style and manner which good writers have the power of throwing around the subjects of their pen can be secured, something may be done by those of less humble claims, by presenting the example of good and faithful men, to encourage to perseverance in the duties of common life, and to contentment with the character of a citizen and neighbor.

The subject of this notice was born in Reading, Windsor County, Vermont, January 21, 1792, and died February 24, 1856. Being the oldest of his father's family, his services were required at home at so early an age that even the scanty advantages of the district school of those days were in his case considerably abridged. Probably reading, writing, spelling and arithmetic were the only branches to which he paid any attention at school. Atlases, or maps, of any kind were not introduced until many years after his leaving school, and he has told his children that he was indebted to the books he bought for them, for his first lesson in geography.

After twenty-one years of age, Mr. Carlton worked out by the month for about five years.—Farm wages were then much lower than at present, while some things that a young man has to buy were much higher. Aside from one year that he worked for his father and received a pair of steers worth forty dollars, his wages probably averaged less than ten dollars a month, and he paid as high as fifty cents a yard for cotton cloth for his shirts. Yet the savings of these years, insignificant as so small a sum is apt to appear to young men, proved the foundation of a competence that many fail to secure with much larger wages and more favorable opportunities.

Two or three years after his marriage, he assumed the maintenance of his wife's parents, and moved on to their farm. This undertaking so often attended by more or less of family jealousy and trouble, was performed to the entire satisfaction both of the old people and of their children and grandchildren, who at the death of his father-in-law, the late Dea. Nathaniel Pratt, numbered forty-six, including great-grandchildren, most of whom resided but a short distance from the old homestead, to which they were perhaps more than ordinarily attached. As one of the number, I feel it but justice to add that our frequent visits to our grand-parents were as pleasant and cordial after the transfer of the property as before. This fact, which might be regarded as strictly a family or personal matter, is alluded to with the impression that it may afford a valuable suggestion to all who are or may be placed in similar circumstances. "New lords, new laws," is an old adage. And it is but natural for those situated as Mr. Carlton was, to feel that others ought to respect such a change of ownership as took place in this case, while those relatives, on the other hand, who have been accustomed from their infancy to regard the old place as a home, find it difficult to respect the rights of a new occupant.

At the time Mr. C. took possession of the old farm, it had become so run out as to produce, the first year, little more hay than would feed the stock that he had bound himself to keep for the exclusive use of the old people, and from the want of necessary farm-buildings, he lost four young cattle the first winter. The estate was somewhat in debt, and money so scarce that he was obliged to pay 12 per cent. for some he had to borrow to meet his taxes and other pressing demands. It was a dark day, and fortune seemed against him. A piece of cloth that his wife had made for a cloak for herself was sold to a young man who wanted a wedding-suit, and paid for with a note which proved worthless, when offered to the merchant to whose account it was intended to apply. Under the circumstances this was a heavy loss, and he often spoke of its taking him four years to outgrow the loss of fifteen dollars! The next web that was manufac-

tured for the cloak was again disposed of in part payment of the purchase of a horse for the old people, in place of one that died. With such a wife a man might well take courage. I have often heard him say that for three years they did not spend so much as "a quarter" by way of pleasure or amusement. The first money he received from his farm was by the sale of wool from the middle of the fleece, at twenty-five cents a pound—the remnants being kept at home to be worked up in his family. The difficulty which the farmers of that day, and of that section, experienced in obtaining money, will hardly be appreciated by the young men of the present time. Nor will they understand how a man of Mr. Carlton's skill to plan, and of his energy and perseverance to execute, could have felt the loss of fifteen dollars for four years. The sale of a few lambs was then almost the only resource for raising money with many farmers in Vermont. They manufactured their own clothing, and, with the aid of a blacksmith, pretty much all of their own tools, and thus managed to get along with very little ready cash; consequently the reception of a small sum was an event to be remembered, especially when as in this case, it came as the "first fruits" of his labor. The produce and stock of his farm, however, soon increased, so that he was able to devote a small sum annually to the reduction of his debts, after providing for the support of a large family. I regret that I am not able to speak more particularly of the improvements which he has effected upon the farm. But perhaps it is sufficient to say that he added something to the "grand list" of the town—something to the real wealth of the country, by his well directed labors, based upon the principle of cultivating thoroughly and manuring highly all the land he plowed, and of keeping good stock or none.

Mr. Carlton was not a trading farmer. He never bought an animal or anything else, for the mere purpose of traffic. This I am aware is not in accordance with the advice of some agricultural writers, who hold that skill in trading is as essential to success in farming as in commerce. It was not from the want of judgment, or knowledge of the value of property, that he refrained from trading. Few men knew better the worth of both real and personal estate. The opinion of Mr. Carlton as to the value of a farm or an animal was often consulted by his relatives and neighbors, and they considered themselves safe in acting upon it. Perhaps the value of his example in this respect would be better appreciated by trading farmers were they to estimate fairly all the incidental expenses of money, time, and distraction of mind which their most lucky trades really cost. The only advice in relation to business Mr. C. gave his son during his last illness was—to work what he was able to on a farm, trade no more than was necessary for his farming business, and to keep his name from other people's paper.

Mr. C. was a strong temperance man, even when almost all farmers used ardent spirits, at least in haying-time. I have heard him speak of his course when he was a young man and worked with those who drank their morning "bitters." "While they were mixing their grog," he said, "I would take a cup, go to the yard and drink as much milk as I wanted fresh from the cow. I could then mow with comfort till breakfast time, while others often complained of faintness long before the horn sounded."

Mr. Carlton was contented with the business of farming, and never seemed to envy the success, either apparent or real, of other professions. His was not a mind to be captivated by show or tinsel. "Others may dress better, and appear in finer style than farmers, but in the end," I have often heard him remark, "they may not find themselves so far ahead of us."

It has been the purpose of this notice to allude only to those incidents of his life and those traits of his character which may afford examples for the imitation or for the encouragement of young farmers, and to avoid everything that is merely eulogistic; and, on this principle I cannot avoid a reference to his course in respect to public offices. He held that those who accepted office ought to have both time and money to spare. Although in later life he represented his town in the State Legislature for two years, and held many other town offices, he persisted in declining all that he thought would interfere with his business, until he found that his circumstances warranted him in accepting.

It is not supposed that the foregoing does full justice to the character of Mr. Carlton. I have neither the facts nor the ability to justify the attempt. My simple effort has been to make the best use in my power of some of the examples which his life afforded of industry, perseverance and well-doing. But even this fragmentary notice would be too imperfect without allusion to his character and example as a neighbor. In trouble and affliction his advice and assistance was frequently sought. In sickness, death and funerals his services were freely offered and gratefully accepted.—And when, at last, the same sad offices were required for him, tne heartfelt respect and esteem which was manifested by his neighbors and townsmen, suggests to my mind the inquiry, whether in our efforts to secure the respect of the community and to obtain an honorable standing in society, we do not too often overlook those almost undefinable little acts of kindness and friendliness which ever mark the character of the good neighbor and the good citizen.

S. FLETCHER.

Winchester, Mass., May, 1856.

PLANTING CORN BY HORSE POWER.

Some weeks since we gave an engraving of *Billings' Corn Planter,* and spoke in general terms of its construction, and its apparent ability to do the work well and with rapidity. At that time we had not used it in the field, and could judge of it only by its appearance, and by the application to it of certain principles of construction which are indispensable in such a machine.

On the thirtieth of May, having a field of about four acres in readiness for planting, we introduced the Planter. The field was partially on a hill-side, had both fast and loose stones, and plenty of witch grass. Before taking it to the field we made a thorough trial with it on a common road, where there was not a sufficient depth of loose earth to cover up all the corn, and where we could plainly see its operations. The trial here being satisfactory, we took it to the field with confidence, mounted a Boston boy on a good horse, and started off. After

going across the field two or three times, and watching the droppings with an interest which the tyro usually feels when engaged in his first achievement, we hauled up and commenced an exploration in the track which the roller made, to learn how matters stood below. Ah, here they are, one, two, three—but where are the fourth, fifth and sixth kernels? It scatters a little, the boy has found them. All right. Mount! In a twinkling the boy was mounted again, Pegasus took up a lively walk, click, click, click, went the machine, and four hours of steady application planted the field, comprising a little less than four acres!

The corn, we think, is planted as well as it could possibly be done by hand; being placed in straight lines and covered at a uniform depth, and what is pleasant, we found the machine admirably adapted for clearing its own way, and putting the ground in the best condition for receiving the corn. It is held easy, sitting uprightly on its planes and the roller, and pushes aside the stones, old corn butts, &c., while the curved iron plates behind the mould-boards draw the fine soil upon the corn immediately before the roller as it passes along. We believe a person having three acres of corn to plant annually will be the gainer by purchasing this machine. We write without the suggestion or knowledge of any one having an interest in the manufacture or sale of the Planter.

For the New England Farmer.

TREATMENT OF PLUM TREES.

Mr. Editor:—Some few days since, I read a short article in the *Boston Daily Journal*, wherein the writer gave his experience of his treatment of plum trees diseased by warts, or those black, rough excrescences, which sometimes attack these kind of trees. As the writer's experience and mine so strikingly coincided, indulge me with some remarks on the subject. I can vouch for the efficacy of that treatment; while his method is a little different from mine, the principle is the same. The writer of that article, in the first place, cut off all the diseased parts of the tree, which strikes me as a very good plan, and then washed them with strong *salt water*. My method has been to apply *salt* freely to the roots of the tree, and during the leafing and flowering period, when the tree is wet with dew or rain, throw fine salt over the branches; and I can truly say, that, by this treatment, I have never failed of curing the most inveterate cases I have met with. Not only does the *salt* treatment cure the warts, but it acts as a powerful stimulant to the plum tree, and by salting them freely, with such other care as every one should bestow upon his fruit trees, I have seen those which had not for years perfected any fruit, bear profusely, and bring it to the most luscious perfection. I can, with confidence, recommend this treatment for plum trees, and feel perfectly assured that those who will try it will be amply rewarded for their trouble. For the coming six weeks, all kinds of fruit trees will need their greatest attention. If those having them wish to have good fruit and thrifty trees, they must not expect them without. Their culture is one of the most delightful employments of the farm—and how liberal the reward they bestow for all the care they receive; and then, too, what an ornament they are, scattered over the farm, giving their soothing shade to man and beast during the hot sunshine, gratifying the palate with their luscious, fleshy fruit, and delighting the eye with their beauty; affording a treble pleasure for the attention which the careful tiller bestows. How largely fruit enters into the happiness and comforts of life! Mr. Editor, now I have my pen in the business, permit me to say a few words about a wash for trees; not only the apple, but almost any other kind of a tree. Where you wish to destroy all kinds of vermin which attach themselves to their bark and limbs, I think it will not injure even the plum. I refer to the solution of common potash—about a pound, to two gallons of water. This is no new thing; its use for such purpose is older, I presume, than the writer of this, and without any disparagement of any other wash, which different persons may fancy; I can safely say—as the loafer said about rum—for a *steady wash*, there is nothing to compare with it. I have used it upon old trees and young trees, in all stages of their growth—and if used at the strength here recommended, I do not hesitate to warrant it to produce no injury whatever to the tree. The present is as good a time as any other to make the first application, and with an old broom, or what I prefer as far better, a good sized sponge—prepared before using, by taking a common darning needle, with good strong twine, sew through and through it, in all directions, which will make it wear a great deal longer—fasten it to a suitable handle. A man can easily wash two hundred tree trunks a day. Most farmers sadly neglect their trees; but a few minutes a day, for the coming six weeks, devoted to this department of the farm, will pretty much do up the business for the season. For instance, how easy it will be some of these dewy mornings, while every caterpillar's nest will glisten in the sun, just to take a light ladder, and with the hand covered with an old mitten, or not, just as suits the fancy, give a hundred or two nests—if there be as many—a hearty squeeze of the hand, as a welcome to spring. But just let these fellows have their own way, a month or two, and they will laugh in your face, and bid defiance to your hand, or most anything else you may resort to, to get rid of them for this season. And then, what a prominent sign of your negligence and carelessness they will present, all over your trees, to every passer-by. Also to that committee which you expect, ere long, to view the *improvements* on your farm. Now do not let this matter have the go-by, amid the pressing duties of the farm, at this busy season. My word for it, a squeeze in time—in this business—saves nine, you will be astonished to find how easily this business is accomplished, if only taken in time. Therefore, take time by the foretop and go at it.

May, 1856. Norfolk.

Remarks.—We like all our correspondent's letter, except the wash which he recommends. Our readers well know how often we have spoken against the potash wash. Made of the strength the writer recommends, and in careful hands, it

may be used without injury. But in hundreds of cases, even of that strength, it would prove exceedingly injurious. We can point to many orchards to sustain these statements. There is no need of using potash. Soft soap answers all the desired purposes,—but even that needs to be diluted. If trees are well taken care of constantly, there is no occasion for violent remedies.

For the New England Farmer.

SONG SPARROW—HABITS OF BIRDS.

MR. EDITOR:—I notice articles occasionally in your paper in relation to the birds. Feeling a deep interest in the study of Ornithology, I always read all that is written on the subject with avidity. Now permit me to contribute a few lines on the subject which lies next my heart. I will take my little favorite, the common *Song Sparrow*, (Fringlila Melodia,) as a subject for my pen. I have made this little bird my special study for the last six years, and now I think I can develop something new in relation to its song, that writers on the subject have failed to notice. Birds all have their peculiar ways of singing. Some have a monotonous song, as the Bay-winged Sparrow. The Yellow-bird has a continuous chatter without any particular form of song. The Cat-bird is a mocker. The Golden Robin has a song of its own, but each one may have a song of his own, though those of the same locality are apt to sing the same tune. The Hermit Thrush has a round of variations, perhaps the sweetest singer of the feathered choir. But the Song Sparrow has the most remarkable charisteristics of song of any bird that sings.

Every male Song Sparrow has seven independent songs of its own, no two having the same notes throughout, though sometimes, as if by accident, they may hit upon one or more of the same.

Six years ago this spring, I first made the discovery. A singer that had taken up his residence in my garden, attracted my attention by the sweet variations of its songs, so I commenced taking observations on the subject. I succeeded at last in remembering all his songs, which are at this day as fresh in my memory as any of our common airs that I am so fond of whistling. On one occasion I took note of the number of times he sang each song and the order of singing. I copy from my journal, six years back.

No. 1, sang 27 times, No. 2, 36 times, No. 3, 23 times, No. 4, 19 times, No. 5, 21 times, No. 6, 32 times, No. 7, 18 times. Perhaps next he would sing No. 2, then perhaps No. 4 or 5, and so on.

Some males will sing each tune about fifty times, though seldom; some will only sing them from five to ten times. But as far as I have observed, each male has his seven songs. I have applied the rule to as many as a dozen different birds, and the result has been the same. I would say that it requires a great degree of patience, and a good ear to come at the truth of the matter; but any one may watch a male bird while singing, and will find he will change his tune in a few minutes, and again in a few minutes more.

The bird that I first mentioned came to the same vicinity five springs in succession, singing the same seven songs, always singing within a circle of about twenty rods. On the fifth spring he came a month later than usual; another sparrow had taken possession of his hunting grounds, so he established himself a little one side. I noticed that he sang less frequently than of old, and in a few days his song was hushed forever. No doubt old age claimed him as a victim. In other cases I have known a singer to return to the same place two, three and four years. But frequently, not more than one. I think there is not a more interesting or remarkable fact in natural history than the one I have related, and it is a fact you may confidently believe.

CHARLES S. PAINE.

East Randolph, May, 1856.

For the New England Farmer.

PLUMS.

MR. BROWN:—A little more than a year ago, in writing a piece for the *Farmer*, I casually made the inquiry respecting plum trees—what to do with those that blossomed fully every year, but never matured any fruit. I was quite interested in the opinions and remarks which it called forth from various correspondents—particularly a North Reading correspondent. Your reply to my query was to cut off the ends of the limbs—to mulch and manure well. Well, I did so. The mulching and manuring I had done several times before. The large tree is a sound, thrifty one; but I do not know of what kind. Now for the results. The tree blossomed very full, as usual; and set an abundance of fruit. As soon as the fruit had grown to about the size of small peas, I scattered fine ashes over them two or three times a week, as well as all my others, of which I have quite a variety. I soon found evidence that the curculio had found my plums, for they began to drop off, for the crescent mark was to be seen, and the white grub at the heart. I then had recourse to jarring them upon a white sheet. These two remedies I continued to use, till not more than one-half dozen plums remained upon the tree I am speaking of. The last of them, when they dropped, were about as large as good sized English walnuts. If I had succeeded in getting ripe fruit from that tree, I had intended to send you a box of it to pay for your advice. You say, in your editorial of May 17th, that you will be content with "*one-tenth* of the fruit saved by the cheap and simple remedy" of sifting ashes. Now as I saved *nothing*, what would your share be? *One-tenth of nothing?* Well, so soon as I get it divided you shall have your share; till then, you will have to accept my thanks, in lieu of plums. But I am not discouraged yet; I shall "try again." By-the-way, a single scion that I set last year grew only some four or five inches less than twenty feet, last year, and is alive and doing well at this time. The scion, I believe, is of the Bradshaw plum, and was set in a Canada stock. Can any of your readers beat that?

J. T. W.

Marlboro', N. H., 1856.

REMARKS.—If we get *one-tenth* of the plums saved this season by sprinkling ashes, plaster and lime upon them, we shall need the largest stall in Quincy Market to hold them. Does "J. T. W." mean twenty *inches*, instead of twenty *feet*, that grew in one year?

NORTH STAR MORGAN.

The Morgan horses have attracted a good deal of celebrity. They are compact, round, usually weighing from ten hundred to eleven hundred and fifty pounds, and are rarely excelled as horses for all work. They are excellent roadsters, when used for road service, as they have a graceful and commanding carriage, are sure-footed and good-tempered.

The horse represented above is six years old, of a light bay color, legs nearly black, with a glossy coat lying upon a flexible skin. His chest is broad, eye pleasant, mane heavy, tail flowing and well set. He is owned by Henry Olmstead, of East Hartford, Conn.

FEED FOR COWS AND PIGS. The cheapest food for pigs through the season that we know of, is tender young clover, refuse or sour milk, and in autumn, the dropping fruit of an apple orchard. Practical farmers differ as to the propriety of cutting clover and soil. One of the most skilful farmers in Western New York thinks it decidely best to shut up his pigs, and cut and feed the clover to them, alleging, from his own experience, that running about a pasture wastes more value of flesh than the cost of soiling. Others have given a different opinion, but these may not have fed their pigs regularly, nor provided them with the necessary comforts of a close pen. Certain breeds may also be better adapted to confinement than others. We should like the results of accurate experiments on this subject. A crop of peas may be found advantageous as food for hogs.

For the New England Farmer.

"MIXING OF POTATOES."

MR. EDITOR:—Having read an article in your paper from Mr. Blake, of Ashfield, with which I cannot agree, I am induced to say a few words to him, and while doing so, to the rest of your fifty thousand readers. He takes the ground that potatoes will mix when planted side by side—that is, that the color of the tuber, as well as form, will be changed by growing together. Now, how is this to be done? In proof of his position, he says he takes his different sorts of corn in the spring and plants in the same field, and at harvest he finds three or four, and perhaps more colors on the same ear.—All very true, plant different sorts of corn together, and if they flower at the same time, they will be almost sure to mix, so that the *seed* will be affected; but does your correspondent remember that the tuber *is not* the *seed* of the potato. As well might we say that tulips, or any other bulbs, by standing in the same bed with others when in bloom, would

be so affected as to lose their identity, and produce the next year a flower of another color and form. But is this ever the case? In the seed you will see the effects of their proximity. So with dahlias as with potatoes, who ever heard of the bulbs or tubers being changed by standing near others? I have had a hundred sorts planted out together year after year without the slightest change having taken place, but "like produced like," and will continue to, till the last great trumpet blows. That the *seed* of these dahlias would have produced varieties very unlike, and have shown the effects of standing with other sorts, I grant. The position the gentleman takes will lead him into innumerable difficulties from which he will find it hard to extricate himself, because according to his theory the fertilizing matter, or pollen, has such an influence as not only to change the flower, (or rather the seed from the flower,) but exerts an influence on stock and root so that we might expect a Baldwin apple tree would be so wrought upon that it might produce Russetts, or Hubbardston Nonsuch, the next year. I trust that every person acquainted with vegetable physiology will see the fallacy of such reasoning. Again, he says, in proof of his position, that he planted Jenny Lind potatoes, and they changed color; does not the gentleman know that some varieties are not fixed, but constantly sport in this way. I, too, have the Jenny Lind potatoes and though most of the potatoes are a light red, yet some are perfectly white; some other sorts do the same, but it is not owing to being planted together, they would do it if planted a hundred miles from any other sort. I know a seedling Camelia, belonging to Messrs. Hovey & Co., of Boston, that produces four or five different colored flowers, and would do so if transplanted any distance you please from all other plants of that class. Dahlias and many other things sport in the same way. I pretend to know something of potatoes, having for the last few years planted many sorts, and that too in the same field, and with the closest observation I have never been able to detect anything like the tubers mixing through the flowers. This year I have planted sixty-six kinds in the same field, a row of each, and I am willing to risk my reputation in saying, that "like will produce like" in color, form, quality, and everything else. J. F. C. H.

Newton Centre, May 31st, 1856.

ABOUT TREES.—The attention of the reader is particularly called to the proposition of our able correspondent WILSON FLAGG, Esq., to deliver two Lectures on "The Relation of Trees to the Atmosphere and Climate." It is a subject little understood —we are glad to find it in such able hands, and hope the services of the lecturer will be secured by most of the towns in the State. He will make the lectures interesting and profitable to any audience.

THE OHIO VALLEY FARMER, is a new paper, just issued at Cincinnati, by Messrs. CROPPER & BROWN. It is in quarto form, monthly, at $1 a year. Its pages are well filled, and the salutatory, by the editor, B. T. SANFORD, is of the right sort. Success to the enterprise.

For the New England Farmer.

RURAL ECONOMY OF THE BRITISH ISLES—No. 14.

NORTHERN COUNTIES.

LANCASHIRE, YORK, DURHAM, WESTMORELAND, CUMBERLAND, NORTHUMBERLAND.

The northern region, the last to come under our notice, before quitting England proper, commences with Lancashire, appended to which, and of the same character, is the West Riding of Yorkshire. Here, everything is on a large scale. Lancashire has an area of 1,200,000 acres, and a population of upwards of 2,000,000, which is nearly two per acre! The southern part of the county is the chief seat of manufactures, and the most densely populated, and Liverpool and Manchester cover it with their dependencies.

This is the most productive, and the dullest district in the world. Let any one fancy an immense morass, shut in between the sea on one side, and mountains on the other; stiff clay land, with an impervious subsoil, every way hostile to farming; add to this, a most gloomy climate, continual rain, a constant cold sea wind, a thick smoke shutting out what little light penetrates the foggy atmosphere, ground, inhabitants and dwellings covered with a coating of black dust,—a strange country; earth and air, in it, seem to be a mixture of coal and water. Such, however, is the influence upon agricultural production of an earnest market for its products, that these fields, so gloomy, are rented, on an average, at seven dollars and a half an acre; and, in the environs of the two cities, arable land lets at $20 the acre.

At one time, Lancashire was a county of large property, and large farming; large property still remains, but farming is more divided with the increase of population. Even in the midst of this dense population, room is found for a number of gentlemen's parks—much to the discontent of the Manchester school, who dislike to see these large tracts withdrawn from farming. An association has been formed, with Mr. Cobden at its head, which numbers thousands of adherents, and a large subscription, for the purpose of buying large properties and cutting them up into small lots. In fact, the opinions of this district are as democratic as those of New England. The repeal of the corn-laws was the work of Manchester; yet Lord Derby, one of the most strenuous opposers of the measure, is one of the largest proprietors in Lancashire. At one time, he appeared likely to overthrow the repeal, as minister; but ended by confirming it. Before yielding, as minister, to the force of public opinion, he made up his mind as proprietor. He succeeded in averting any reduction of his rents, by using the great antidote, that universal remedy—drainage. His whole lands were under-drained, the farmers paying five per cent. on the outlay, in addition to their rents. Such is the effect of draining upon these clay lands, under that damp climate that every one profits by it, even Lord Derby, himself, in spite of himself. English farming was brought into competition with the farming of the whole world, by the repeal of the corn laws—proprietors met the competition by advancing still more capital to agriculture, in outlays for drainage. New Engalnd, when brought into competition with the Western States, in farming, has, so to speak, left her plow in the furrow, and moved into the

land of her competitors, instead of advancing more capital to her land.

The plan adopted in this county, for bringing bog or moss land into cultivation, is worth describing. First of all, deep trenches are cut at a distance of thirty feet apart, in which the tiles are placed; after that, vegetation on the surface is burnt, and the ground is broken up by several cross plowings. When the whole is well pulverized, marl is carried on, by means of a movable railway, and spread over the land, at the rate of 100 to 150 tons to the acre. During these operations, it frequently happens, that the ground is so soft that it is necessary to put planks under the feet of both men and horses to prevent their sinking. The land then receives a manuring of night soil and cinders, and is planted with potatoes; after this crop, which is usually a good one, the Norfolk rotation follows.

York is the largest county in England, containing 3,800,000 acres. It has been divided into three parts, called Ridings, each of which is larger than an ordinary county. The West Riding contains the great manufacturing towns of Leeds and Sheffield, the one as famous for its woolens, as the other for its hardware; and in such a neighborhood, agriculture must necessarily flourish, and rents and wages rule higher than the average. The land is nearly all in grass, and like all districts, where the population is great, dairy farming, and the fattening of cattle, are the chief occupations. Many farms are below twenty arces, cultivated by journeymen weavers, who add the produce of the farm to that of the loom.

The East Riding is quite different from the West, without manufactures, no large towns, no small farms, the country is exclusively agricultural, and large farming reigns supreme.

The North Riding is the beginning of the mountainous region. It contains some fertile valleys, but the whole is a vast table-land of about 400,000 acres, 1500 feet above the level of the sea, called the Yorkshire moors. Human ingenuity has discovered a way of turning these poor lands to good account. Both hill and valley are almost entirely in pasture, and the stock reared upon them, horses, oxen and sheep, are held in great repute. The best English carriage horses are bred here; the sheep of this region, a distinct race, improved after Bakewell's principle, supply the markets of the north. Of cattle, the largest number are the short-horned breed. There are, perhaps, half a dozen breeders of them, who have, to a certain extent, a monopoly, and spare neither expense nor pains to keep up and improve their stock—often selling their bulls at from $1000 to $2000.

Durham is a small county, whose principal wealth consists in coal mines; the inexhaustible produce of which is exported from Newcastle, and other ports. Clay lands, with their usual difficulties, predominate. The average extent of farms is 60 acres, the farmers of which are, generally speaking, common laborers, who do everything for themselves, and are not rich enough to lay out much upon the land.

Westmoreland is also a small county, and its name—*land of the west moors*—indicates the character of the soil, while it is the most mountainous, the most uncultivated and thinly peopled part of England. The valleys of Eden and Kendall have a rich agriculture amidst this land of lakes, this Switzerland of England, so celebrated by the poets.

Cumberland also is mountainous, and crowned, in the south-east, with the high peaks of Seafell, Helvellyn and Skiddaw. The history of this county is very instructive, and confirms the truth, that farmers, even proprietor farmers, who adhere to old usages, and despise skill and capital in farming, will run out and disappear from the land. At one time, a population of small proprietors, called Statesmen, dwelt in this county, each family possessing from fifty to a hundred acres. Probably they owed their origin to the necessity of defense against the invasion of Scottish marauders. You will find their mode of life pleasingly described by Wadsworth. But, as time went on, they adhered to their old usages, their want of ready capital, and want of skill rendered the land unproductive in their hands; and debts, from one cause or another, accumulated on their small properties, and swallowed them up. On the very lands where these *lairds*, as they were called, could not get a living, with no rent to pay, a rent-paying farmer, with a little money, and more skill, now flourishes. Nothing can stop a decay of this kind.

No English nobleman, and but few Englishmen, can be convinced that any other than large farming can be made profitable. Sir James Graham owns a large property in this county, called Netherby, of 30,000 acres. In 1820, this property contained 340 farms, averaging 90 acres each. The starting point of Sir James, in the improvement of this property, was to reduce the number of farms upon it to sixty-five, and retain only those farmers who had capital, skill and energy. He spent, also, considerable sums in draining his lands, on which outlays the farmers paid him five per cent., in addition to their rents. He improved his property and rents; but two hundred and seventy farmers and their families must have discussed and settled all the sad questions which pertain to the breaking up of home, the change of pursuits, and to emigration. That cannot be a good system which breeds such questions.

Nowhere does one realize the necessity and benefits of draining, as he does in these northern counties. And this is attributable to two causes; the clayey nature of the soil and the subsoil, and the great abundance of rain. In London, the amount of rain that falls, in a year, is twenty inches; in Lancashire, forty; on the coast of Cumberland, forty-seven, and in the lake district of Cumberland, in the high valleys, one hundred and sixty inches—a tropical amount of rain.

Northumberland is situated on the eastern side of the range of the British Appenines, as Cumberland is on the western side, and, like Cumberland, is divided into a mountainous district, and low ground. The mountainous part is mostly sterile; but the Cheviot hills support the race of sheep which bear their name; and some of the valleys are rich and excellent land. The agriculture of the Lowlands of Northumberland has a high reputation, which is just, only in respect to the light soils, which lie between the mountains and the coasts. The clayey district is not to be praised.

We have now finished our tour of England, the sovereign portion of three kingdoms—the sceptered isle.

If it is rich in its agriculture, I think our journey justifies my remark, that it does not owe the supe-

riority of its agriculture to the natural superiority of its soil, nor to its climate.

I think every observation we have made, on our way, justifies me in saying, that two cardinal things in agriculture are *capital* and *skill*.

I think the example of England shows, that agriculture cannot be rich in crops unless it is rich in live stock, cattle, sheep, horses and pigs; because live stock, by their manures, are the causes of crops, and are also the consequences, or results of the crops which feed them.

I think we have seen that no breeds of sheep, cattle or pigs can be profitable, or as profitable as breeds which are precocious, or early fit for the butcher, and which yield the greatest quantity of meat at the earliest age; and that a selected breed of milch cows is more profitable than such breeds as we may happen to have.

I think we have seen that England has profited by a fixed rotation of crops, so far as to make it, at least, an open question, whether other countries may not profit by a similar one.

Other things our journey has suggested; but these things especially.

Some of these conclusions it behoves us to ponder, if a statement contained in your paper of the 23d of February last be true, to wit: "By the returns made to the Patent Office, it appears that between the years 1840 and 1850, 300,000 acres were added to those, previously under improvement in Massachusetts, and, during that time, there was a reduction of 177,000 in the number of sheep and swine, in the State." I do not vouch for the truth of the statement, but you have published it. Unless other live stock have increased, and taken the place of the sheep and swine removed, here is an anomaly in our agriculture. More acres improved, and less live stock supported! Now every good farmer must see, that two facts must lie at the basis of our agriculture. The *first* is, that we cannot take many crops from our land, without exhausting it. The *second* is, that animal manure is the best agent for renewing the fertility of the soil. Therefore, we must apply ourselves to feeding the largest number of cattle possible. As our cultivated land increases, our live stock should increase, or all is wrong and awry. We have, in a large animal production, the butcher's meat, which northern people require, and the means of increasing the quantity of manure, the richness of the soil, and the production of grain and roots and grass. That Massachusetts agriculture is deficient in this respect, the number of animals, all will acknowledge; but if the patent office report be true, we are going backward, in our agriculture, unless it can be shown, that as we have diminished our sheep and swine, we have increased our other live stock. M.

THE GRAPE AND STRAWBERRY.—We have before us a new book on the culture of the Grape and Wine-Making; by ROBERT BUCHANAN, with an appendix containing directions for the cultivation of the Strawberry, by N. LONGWORTH. Cincinnati, Moore, Wilstach, Keys & Co. This work gives the necessary directions for the preparation of soil, planting, spring and summer pruning, culture, diseases, varieties, &c. Also, the process for making vines. Several pages are devoted to a description of the cultivation of various kinds of the strawberry. For sale by J. Q. A. Warren, 119 Washington Street.

THE FARMER'S WIFE.

It is a common saying, and perhaps as true as it is trite, that one woman is worth two men on a farm. It is certainly beyond dispute that those branches of husbandry which come mostly within a woman's department are among the most profitable parts of the business. The dairy is a source of large profit, *if well conducted*. It would not be a remarkable cow that would give thirty dollars in butter yearly,—and with a dozen cows yielding at that low estimate, the farmer, with the addition of a garden and a hog, will very nearly have a support for a family. And this is in great part, from the care and labor of his wife. In the report of the committee on butter and cheese to the Hampden county agricultural society in 1846, it is said, the value of butter, according to the statistics of the assessors returned to the Secretary of the commonwealth for the year 1844, was nearly double that of all the sheep then in the State. It also exceeded the aggregate value of wheat, rye, barley, buckwheat and oats raised during the year.

The dairy, however, important as it is in the labors and profits of the farm, is not the only branch of rural economy which requires the care and labor of the wife. Poultry, though smaller in amount, is, in proportion to the expenditure, an object of much profit. And the domestic manufactures, wrought out by the spinning wheel, (for there are some left yet) loom, needle, and other modes and processes of woman's handiwork, are not inconsiderable.

All these labors are in addition to the housekeeping cares and duties, which alone are considered by the industrious wives of the city, to be quite sufficient for any woman.

The farmer's success depends very much on the industry and good management of his wife. It is in the power of the woman, at least, to do a large share in making up the yearly income of the farm, if she is not really quite equal to two men.

With a few good cows, and a wife who is skilful and careful in the management of the dairy, the farmer always has a safe dependence, even though the drought or depredating insects should somewhat diminish his crops. But the farmer's wife must not have too much required of her. Good, dry fuel, and plenty of soft water, should always be conveniently supplied, and all heavy and exposed work be performed by the farmer or his men. Then he will have a cheerful, tidy help-mate, who will bear up her end of the yoke in such an even, easy, and agreeable manner, as to make the domestic duties a source of contentment and bliss.

For the New England Farmer.

HOP VINES.

"Good evening, neighbor Robbins. Take a seat."

"Good evening, sir. Pen, ink and paper before you. I often find you thus occupied. I wonder what you can find to write about, so much."

"Yes, I sometimes employ a leisure hour in this way. I was just thinking I would write something for the *Farmer*. What shall I write about?"

"Well, there are so many subjects connected with agriculture, that I should think you could readily find something to write about."

"But, my dear sir, in the very fact that there are so many subjects, lies the difficulty. If there were but one or two subjects, one would never be at a loss what to write about. I suppose many a man has lived a bachelor all his life, because he could not make up his mind which one of the many pretty girls around him, he should select for a wife. If there had been but one or two girls in his neighborhood, he would have married long ago. Is it not so, neighbor R.?"

"Perhaps there is something in your suggestion. One would not like to offend all the rest, by selecting one who is no better than they are."

"Offend the rest! Do you believe the girls are so selfish as to be offended because a man chooses one of their number for a wife? No, no! They will like him the better for thus showing a proper appreciation of the value of the sex; and, besides, when one is taken off there is a better chance for the rest. Depend upon it, sir, the girls will never be offended when a man takes a wife. But what is that which you have in your hand?"

"A piece of hop vine."

"Let me see it. Perhaps this will do for a subject to write about."

"Write about a hop vine! I think if I were going to write, I would take some juicier subject than that. That must be a little too dry."

"The virtues of plants do not all reside in their juice, neighbor. Let us see. Here is the bark or outer covering, the bitter principle, the tannin and the coloring matter, the leaves and the young shoots, of which cattle are very fond. Now let us recollect what we have heard about the uses of hop vines.

In England, they are used instead of oak bark, for tanning light skins. The red vines are said to contain the most tannin. In Sweden, the stalks are successfully converted into strong cloth for sacking and bags for holding the hops. They are gathered in autumn, and soaked in water during the winter, and after being dried on stones, are dressed like flax. A coarse kind of paper has been made from them. They are used as binders for sheaves of grain. The prunings are cut into pieces, and stored for winter food for cattle and horses, which are very fond of them, their bitterness constituting them an excellent stomachic. The tender shoots of the hop may be used in the spring as a salad. In Flanders, the young shoots are used in the same way as asparagus. An extract is procured from the leaves and shoots that forms a dye for woollens, of a fine cinnamon color, and in France they are made to afford a permanent brown. All these uses are distinct from the hop itself, for which the plant is cultivated. Here, then, we have tannin, cloth, paper, ropes, food for cattle and men, medicine and dye-stuffs, all from the hop vine. This is not so dry a subject, after all, neighbor! And, besides, from this subject, we may gather "food for thought." How many of the products of nature consist essentially of the same elements, and may be readily substituted in practical use, the one for the other. Here is a fruitful text from which an ingenious man might write a long sermon; herein are displayed the forecast and wisdom of the Creator. When the supply for man's wants is exhausted in one form, he finds it stored up in another form, and safely preserved for his use; as a general fact, man never learns the uses of material things any sooner than he is compelled by his necessities; and, sometimes he struggles a long time under difficulties, before he finds out the proper remedies, although they exist in abundance in the commonest objects that lie thickly scattered around him.

The Indians and Mexicans used iron ore to paint their bodies, and ornament the dressed skins of animals, and all the while used axes and chisels and arrow-heads of stone, because they had not learned to separate the metal from the oxygen which had converted it into rust. Oyster shells, clam shells and bones, were an incumbrance and a nuisance until their agricultural use gave them a commercial value. When we shall invent some process by which granite can be converted into fine powder like gypsum, it will become valuable as a manure for certain soils, and then we shall be able to make apple trees thrive on clay soils, as well as on gravelly loams. Straw, certain grasses and weeds, are now becoming valuable as materials for paper, and I have recently noticed that the stalks of the broom corn are being used for this purpose. The waste of the soap maker and tanner are now valuable as manures. So in a thousand instances, substances of the most promising appearnce, and of no apparent value, have become the fruitful sources by which our wants and conveniences are supplied. The fact is, neighbor, nature has created nothing in vain. When we have discovered a new and important value in some common and hitherto worthless article, we are surprised that it was never thought of before. The most necessary and useful articles are the cheapest and most abundant, the world over, and in this fact the care and benevolence of the Creator are manifested. He has furnished the raw material, and left it to the ingenuity and industry of man to convert it into such forms as shall best contribute to his advantage and comfort. But I am not going to write a sermon, and so I will stop. I thank you, neighbor, for bringing in that piece of hop vine. If it has no other use, it has served to occupy us pleasantly for half an hour. Well, I shall hang up this dry hop vine, in some conspicuous place, just to remind me that there is nothing made in vain, and so good-night." J. R.

DEVON CATTLE.—We have received from SANFORD HOWARD, Esq., American Editor of the Devon Herd Book, a circular, stating that he is now collecting materials for a third volume, and inviting breeders to send him the pedigrees of all animals eligible for entry in the work. Mr. Howard has also sent us LEWIS G. MORRIS' 7th catalogue of pure bred domestic animals, to be sold at auction at Mount Fordham, N. Y., on Tuesday and Wednesday, the 24th and 25th of June, 1856.

For the New England Farmer.

A FEW WORDS ABOUT PEARS.

I am much pleased, Mr. Editor, with your plan of giving pictorial representations of different varieties of fruit—particularly pears. The picture of the old St. Michael, in the *Farmer* of May 24, was so true to life, that I could almost taste the flavor of it. You say truly that the St. Michael has "many names," but I think you are mistaken in supposing that it is called, in New York, the "Vergalieu." As far as my knowledge goes, the Vergalieu, in New York, is identical with the pear of the same name raised in New England, and throughout the West, and which differs materially from the St. Michael, though, like that, it has many synonymes. The Virgalieu, or "Virgouleuse," was one of the first pears ever imported into this country from France, where it was not only called by the name it bears here, but also by those of *de Glace, Bezi Royale, Chambrette*, &c. This fruit is still, I understand, to be found occasionally in the markets of Paris, but has very much deteriorated under the peculiar modes of French culture.—It grows well in western New York, and in the Western States, so far as my knowledge extends, but it has seldom succeeded well for any length of time here in Massachusetts. The same may be said of late years of the St. Michael, the wood of which cankers, and the fruit of which blasts and cracks when exposed to our east winds. In situations where it can be protected from these, I believe it can still be cultivated in perfection, and I am loth to suppose that this fine old variety is to be entirely given up, although I believe there are other varieties equally good and equally prolific. In Rhode Island and Connecticut it has been cultivated under the name of the *Garner* pear, but in France it generally goes by the title of *Doyenne Blanc*, or *Beurre Blanc*.

There are several comparatively new varieties of pears now coming rapidly into vogue here, among which I will mention the *Rostieza* and *L'Angolier*. The wood of the former is almost as dark as that of the Baldwin apple, and it grows very thriftily upon the quince stock. The fruit is small, though somewhat larger than the Seckel, equally high flavored, and the tree comes much earlier into bearing. The L'Angolier I have not yet tried, though I have reason to believe it will prove one of our very best varieties.

I saw in a recent number of the *Farmer*, an article from a nurseryman in New Hampshire, (Mr. Copp, of Wakefield,) on the subject of "double-working" the pear—that is, grafting or budding on stocks which have been already grafted or budded. The object of this is to obtain the fine varieties which are weak of wood upon stocks of those varieties known to be good growers. This has been tried pretty effectually by the French fruit-growers but I learn that it is now generally abandoned by them, as a practice which deteriorates both the tree and the fruit. Mr. Copp mentions the *Jargonelle* as a good variety for double-working, but I think he has fallen into the same error with many other nurserymen, and substituted the *Quisse Madame* for the *Jargonelle*. The latter is not vigorous, so far as I have knowledge of it, and I have seen it under a great variety of circumstances. So far as my experience goes, the very best grower upon the quince stock is the *Beurre d'Amaulis*, and on the pear stock the *Beurre Diel*. If nurserymen are disposed to try the experiment of double working, either upon the pear or quince, I think they will find these two the best varieties for that purpose, though I by no means recommend the experiment, except in cases where fruit proves to be bad, as is the case with the Beurre Diel upon some wet and heavy soils.

In closing, permit me to say that I have seen the best exemplification of the growth of the different varieties of the pear upon quince stocks, in the extensive nursery of Mr. Geo. W. Wilson, of Malden. Whole rows of the *Beurre d'Amaulis, Rostieza*, &c., grow with extraordinary vigor and thrift, while rows of other varieties, budded at the same time and treated in the same way, make but a feeble and sickly appearance. I would give more for a look at the results of Mr. Wilson's thorough, live experiments, in budding upon the Angiers quince, than for whole hecatombs of newspaper speculations upon the subject of "double working."

Somerville. E. C. P.

EXTRACTS AND REPLIES.

A BIG CALF.

One of my neighbors, Mr. Samuel Arnold, has a Durham cow which dropped a calf the 23d inst., that weighed 117½ pounds when 8 hours old.

Searsmont, Me., May, 1856.

FREAK OF NATURE.

MR. BROWN:—Enclosed you will find proof that Mother Earth does not always bring forth fruit according to the *common* course of events, or *ordinary* expectations of men. Our farmers have too little *faith* in her promise to return a crop in proportion to the care bestowed upon her cultivation. The sample of wheat I forward you, is from a lot of seventy bushels, raised on one and three-fourths acres, by Horace Kingsbury, Warren, Vt., the last season. The above crop was sold for seed at $3 per bushel, except a small lot which made 52 lbs. fine flour per buushel, without tolling. The above wheat was the Rio Grande. Mr. K. sows 8 or 10 acres this yesr. P. J.

REMARKS.—The specimen of wheat sent us with the above is very fine—the kernels are large, clear, and handsomely shaped. Farmers purchase too much flour.

TRANSPLANTING EVERGREENS.

DEAR SIR:—I think I have seen it somewhere stated, that evergreens, such as the Fir, Balsam, and common White Pine, may be transplanted with success in June. Will you inform me through your paper respecting it, and if it is the best time. Yours, S. D. WHEATON.

Orange, May, 1856.

REMARKS.—Transplant evergreens any time, before they begin to grow.

BOG BRAKES.

Cut them off a little below the surface of the ground, with an old axe or hoe; they will seldom show their *heads* again, if done about the first of June. C.

Brattleboro', Vt., 1856.

WATER LIFTER.

C. S., *Boston.*—We are expecting an engraving on the subject of raising water by the cow or ox who drinks, and when it comes, shall refer to the subject again.

—

THORN HEDGE.

Information wanted as to the best method of obtaining a thorn hedge—what the process, &c. Also, in regard to celery, when the seed is to be sown—what the process, &c. A SUBSCRIBER.

REMARKS.—Hedges are produced by setting the plants—which may be purchased at the nurseries—in good soil, finely pulverized. The process given below is from an article by our associate editor, Mr. FRENCH, published originally in the March number of the *Farmer* for 1852.

"My land being light and sandy, I threw out the earth, forming a trench about three feet wide, and eighteen inches deep, filled it up with turf and soil about half full, and the rest with good soil and compost manure, about half and half. I set my plants on the trench, ten inches apart *in a single row*, in April or May, and cut them down to within four inches of the surface. I keep the land light and free from weeds, and cut the plants every autumn, so that they gain but *six inches* height each year, the main object being to get the hedge thick at the bottom. Some of my plants I have cut twice, once in Summer, and once in Fall or Spring. I am not decided whether they should be cut once or twice. My plants grew the first year about two feet, and afterwards they have made shoots three feet long, when not stopped, in Summer."

—

BRANDON PAINTS.

Will some one inform "A Subscriber," where Brandon paints may be obtained? Whether they are durable, what their cost is, and whether they are in various colors?

—

AFRICAN MARROW SQUASH.

T. A. S., *South Danvers, Mass.*—Will make fair trial of the squash seeds kindly sent by you, and report success.

—

WHAT AILS MY COW?

"J. H." says he has no doubt it is eating too much salt food—that is, hay salted and fed too liberally.

—

THE STRIPED SQUIRREL.

A. M., *Concord, Mass.*, is of the opinion that the striped squirrel carries away the earth in his mouth, which he displaces when digging his hole.

—

"N." may find the book he desires at F. S. SAXTON'S, 81 Washington St., Boston.

FARM STOCK IN THE UNITED STATES.—It is said that there were estimated, two years ago, to be within the United States more than twenty millions of horned cattle, more than twenty millions of sheep, and more than thirty millions of swine.

UNITED STATES AGRICULTURAL SOCIETY.

The Fourth Annual Exhibition of the UNITED STATES AGRICULTURAL SOCIETY will be held at Powelton, (Philadelphia,) on Tuesday, Wednesday, Thursday, Friday and Saturday, October 7th, 8th, 9th and 10th.

The first exhibition of this Society, held at Springfield, Mass., 1853, was devoted exclusively to an examination of horses;—at Springfield, Ohio, cattle alone were exhibited; in Boston, 1755, all departments of farm stock, cattle, horses, sheep and swine, were shown.

The Society, encouraged by past success, and by the approbation of the agricultural community, now propose to offer premiums, not only for domestic animals, but also for poultry, and the products of the fruit garden, the grain field and the vineyard, and for agricultural implements and machinery.

Premiums from twenty-five to two hundred dollars, amounting in the aggregate to over twelve thousand dollars, will be offered for the various classes of domestic animals, fruits, American wines, vegetables, grains, and agricultural implements and machinery.

A local committee of forty-seven citizens of Philadelphia, representing the various branches of industry, has already been appointed to co-operate with the officers of the Society in perfecting arrangements for the exhibition; and fifteen thousand dollars have been guaranteed to meet expenses. This material aid, coupled with the excellence of the selected location, and the large amount of premiums offered, induces the expectation that the exhibition of 1856 will be superior to any of its predecessors.

Favorable arrangements for the transportation of stock, and other articles, will be made with the various railroads.

The list of entries, the awards of premiums, and proceedings, will be published in the Journal of the Society for 1856.

The premium list, with the regulations and programme of the Exhibition, will be furnished on application to Mr. JOHN MCGOWAN, Assistant Secretary of the United States Agricultural Society, 160 Chestnut Street, (rooms of the Philadelphia Agricultural Society,) or by addressing the Secretary at Boston.

MARSHALL P. WILDER, President.
WILLIAM S. KING, Secretary.
June 1st, 1856.

A RAILROAD INCIDENT IN AMERICA.

I had found it necessary to study physiognomy since leaving England, and was horrified at the appearance of my next neighbor. His forehead was low, his deep-set and restless eye significant of cunning, and I at once set him down as a swindler or pickpocket. My convictions of the truth of my inferences were so strong that I removed my purse—in which, however, acting by advice, I never carried more than five dollars—from my pocket, leaving in it only my handkerchief and the checks for my baggage, knowing that I could not possibly keep awake the whole morning. In spite of my endeavors to the contrary, I soon sank into an oblivious state, from which I awoke to the consciousness that my companion was withdrawing his hand from my

pocket. My first impulse was to make an exclamation; my second, which I carried into execution, to ascertain my loss, which I found to be the very alarming one of my baggage checks—my whole property being thereby placed at this vagabond's disposal; for I knew perfectly well that if I claimed my trunks without my checks, the acute baggage-master would have set me down as a bold swindler. The keen-eyed conductor was not in the car, and, had he been there, the necessity for habitual suspicion, incidental to his position, would so far have removed his original sentiments of generosity as to make him turn a deaf ear to my request; and there was not one of my fellow-travellers whose physiognomy would have warranted me in appealing to him. So, recollecting that my checks were marked Chicago, and seeing that the thief's ticket bore the same name, I resolved to wait the chapter of accidents, or the reappearance of my friends. * * *

With a whoop, like an Indian war-whoop, the cars ran into a shed—they stopped—the pickpocket got up—I got up, too; the baggage-master came to the door. "This gentleman has the checks for my baggage," said I, pointing to the thief. Bewildered, he took them from his waistcoat pocket, gave them to the baggage-master, and went hastily away. I had no inclination to cry, "Stop thief!" and had hardly time to congratulate myself on the fortunate impulse which had led me to say what I did, when my friends appeared from the next car. They were too highly amused with my recital to sympathize at all with my feelings of annoyance, and one of them, a gentleman filling a high situation in the east, laughed heartily, saying, in a thoroughly American tone, "The English ladies must be 'cute customers, if they can outwit Yankee pickpockets."—*The Englishwoman in America.*

PRUNING.

The object in pruning, generally, is not to make the tree assume a form foreign to its nature, but, in this country, to relieve it of a redundancy of growth, and to take away those parts which interfere with each other, and which may, if suffered to remain, endanger the whole condition of the tree at some future time. In England, where the climate is damp and the sun often obscured, they shape the tree to relieve it from these unfavorable influences, giving it a broad, open head, where the sun, when it does shine, may be freely admitted as well as the air. In this country, where sun and air are hot for two or three months, somewhat dense heads are unobjectionable, provided the limbs do not chafe each other, and the soil is sufficiently rich to sustain a liberal amount of limbs and leaves.

The Baldwin, for instance, unchecked, will form a thick, compact top, the Northern Spy prim and slender, and running up freely for the first six or eight years, while the Rhode Island Greenings and most of the sweet apples will spread themselves widely on every side, or assume the whip-lash form, with few leaves except on the extremities of the branches. It ought to be clear to all, that these varieties should receive different treatment in pruning. No single rule will be applicable to all trees.

The *form* of fruit trees should be decided in the nursery; that is, the limbs should be set by the nurseryman where they ought to remain, so that after being transplanted there shall be no cutting of the main branches. But as there are different tastes in this matter, the limbs may be allowed to come out at different heights from the ground, ranging from three feet to five feet, and in this range all customers may be suited. Where trees are started in life in this manner, there is really very little pruning to be done. With a sharp keyhole saw, a good knife, and a quick eye, one may do all that is required to 200 young trees that have been well tended in half a day.

The principal amount of pruning that is to be done is upon old trees, that have been badly treated, and trees that have been grafted. It is customary to set two scions in each stock, so that there may be a double chance of success, and as most of the limbs are usually taken off, if both scions live, the tree is crowded to excess with its new top. In such cases, one of the scions in each stock, after having grown one year, should be cut out and the wound carefully covered with wax. But this is generally neglected, the top is dense, confused, and unsightly,—and these are the cases where great skill and tenderness are required in pruning.

In performing this work, it is of the utmost importance as to what season of the year it is to be done. We think few persons have investigated this subject more, or had more practical experience in it, than ourselves, and yet our conclusions are contrary to those of several of our contemporaries. The orchardist must be a careful student of the habits and physiology of the tree. We believe that the theory presented in our columns by Mr. Groodrich, of Burlington, Vt., and by Mr. H. Curtis, in the *Rural Intelligencer*, Augusta, Me., is correct. It may do to take off a twig or quite small branch at any time, but it should be an inexorable rule, that *no limb larger than a pipe stem should be removed during the months of March, April or May.* There is not an old orchard in our knowledge in which we cannot point out an irretrievable mischief caused by *spring pruning*,—and point it out so clearly as to convince the most prejudiced mind, if it be a candid one.

Prune through the middle of June, and again after the leaves have fallen, in October and November, always covering the wounds with gum shellac dissolved in alcohol, paint, or something that will keep out the sun and air. Fill the cavities of old trees with clay and cow manure, thoroughly mixed, and you will find your labors abundantly repaid.

The whole subject is important, and suggests more points than we have time or space for at present.

ABOUT BUDDING.

The time in which budding is usually performed is from early in July to the middle of September; plums and cherries are among the earliest to be budded, and pears, apples and quinces the latest. If the season in July, or even in August, be very dry, budding had better be postponed until there are copious rains. Stocks, from a quarter of an inch to an inch in diameter may be budded, although those of an inch are more suitable for grafting. The buds should be selected from thrifty shoots that have nearly done growing.

Shield, or T budding, is the most approved mode in all countries, and is described by Downing as follows:

Fig. 1.—A stick of Buds.

Having your stick of buds ready, choose a smooth portion of the stock. When the latter is small, let it be near the ground, and, if equally convenient, select also the north side of the stock, as less exposed to the sun. Make an upright incision in the bark from an inch to an inch and a half long, and at the top of this make a cross cut, so that the whole shall form a T. From the stick of buds, Fig. 1,) your knife being very sharp, cut a thin, smooth slice of wood and bark containing a bud.—With your budding knife, now raise the bark on each side of the incision, just wide enough to admit easily the prepared bud. Taking hold of the footstalk of the leaf, insert the bud under the bark, pushing it gently down to the bottom of the incision. If the upper portion of the bud projects above the horizontal part of the T, cut it smoothly off now, so that it may completely fit. A bandage of the soft matting is now tied pretty firmly over the whole wound, commencing at the bottom, and leaving the bud, and the footstalk of the leaf only exposed to the light and air.

Common shield-budding, Fig. 4, practised in all gardens in Europe, differs from the foregoing only in one respect—the removal of the slice of wood contained in the bud. This is taken out with the point of the knife, holding the bud or shield by the leaf stalk, with one hand, inserting the knife under the wood at the lower extremity, and then raising and drawing out the wood by bending it upwards and downwards, with a slight jerk, until it is loosened from the bark; always taking care that a small portion of the wood remains behind to fill up the hollow at the base or heart of the bud. The bud thus prepared is inserted precisely as before described.

Fig. 2.—American Shield Budding.

The American variety of shield budding is found greatly preferable to the European mode, at least for this climate. Many sorts of fruit trees, especially plums and cherries, nearly mature their growth, and require to be budded in the hottest part of our summer. In the old method, the bud having only a shield of bark with but a particle of wood in the heart of the bud, is much more liable to be destroyed by heat, or dryness, than when the slice of wood is left behind, in the American way. Taking out this wood is always an operation requiring some dexterity and practice, as few buds grow when their eye or heart wood is damaged. The American method, therefore, requires less skill, can be done earlier in the season with younger wood, is performed in much less time, and is uniformly more successful. It has been very fairly tested upon hundreds of thousand fruit trees, in our gardens, for the last twenty years, and, although practised English budders coming here at first are greatly prejudiced against it, as being in direct opposition to one of the most essential features in the old mode, yet a fair trial has never failed to convince them of the superiority of the new.

Fig. 3.—Bud Bandaged.

Fig. 4.—European Shield Budding.

After treatment. — In two weeks after the operation you will be able to see whether the bud has taken, by its plumpness and freshness. If it has failed, you may, if the bark still parts readily, make another trial; a clever budder will not lose more than 6 or 8 per cent. If it has succeeded, after a fortnight more has elapsed, the bandage must be loosened, or if the stock has swelled much, it should be removed altogether. When budding has been performed very late, we have occasionally found it an advantage to leave the bandage on during the winter.

As soon as the buds commence swelling in the ensuing spring, head down the stock, with a sloping back cut, within two or three inches of the bud. The bud will start vigorously, and all "robbers," as the shoots of the stock near to and below the bud are termed, must be taken off from time to time. To secure the upright growth of the bud, and to prevent its being broken by the winds, it is tied when a few inches long to that portion of the stock left for the purpose, Fig. 5. About mid summer, if the shoot is strong, this support may be removed, and the superfluous portion of the stock smoothly cut away, when it will be rapidly covered with young bark.

Fig. 5. Treatment of the growing Bud.

☞ New white wheat of the first quality is arriving at Augusta, Georgia.

THE CLIFF SWALLOW.

A beautiful story is going the rounds, taken from an old number of the Greenfield (Mass.) *Advertiser*, of the Cliff Swallow, which species has recently made its appearance, and begun to make settlements under the eaves, in Delaware county, Pa., its nest being in the shape of a retort with a long neck.—The story referred to is of one of these swallows, which was seen to linger after the tribe had taken its usual flight to the tropics, apparently alone, through the autumn and winter. The following is the explanation:

Spring came, and he was there. An occurrence so singular, and contrary to the habits of the migrating tribes, caused his motions to be watched with more attention. At length another head was observed protruding from one of the nests, which seemed to be the abode of the bird which had been remarked with so much interest. On examining the nest the mystery was beautifully solved. Another swallow was found there a prisoner.

One of its legs had become entangled by a thread of hair, which had been used in the lining of the nest, and held it there a captive. Yet it was not deserted by its faithful mate. Through all the long and dreary winter, this patient self-devoting love supplied her wants. He saw without regret, but for his hapless consort, the deepening gloom of the fading year; he felt without feeling, but for her, the advancing rigor of winter; and if he, at times, remembered the sunny skies of the South, and the pleasures his tribe were then enjoying, it was only to sigh that she could not partake of them. By night and by day, in sunshine and in cloud, in the calm and the tempest, he was with her, ministering to her wants, and cheering the hours of her hopeless captivity by his caresses and untiring devotion.

CANKER WORMS.

Boston, May 28th, 1856.

TO THE EDITOR OF THE EVENING TRANSCRIPT.

DEAR SIR:—There was, last year, under date of June 21st, published in your paper, a letter from William Plumer, Esq., of Lexington, in relation to certain experiments made by him for the destruction of the canker worm, since which time several persons have expressed a doubt of its effects, having tried it at a much later season of the year, and after the worm had gone into the ground. Under these circumstances, I requested Mr. P. to state the time and mode of trying the experiments, and the following communication is his answer to the same.

Please publish this in your valuable journal and oblige Your most obedient servant,

70 *State Street.* JAMES GOULD.

Lexington, May 27th, 1856.

JAMES GOULD, ESQ.:—Dear Sir,—I take pleasure in again stating, at your request, the means I used some years since to destroy the canker worm, by the application of your muriate of lime. And I do this the more willingly, because I understand there has been doubt expressed by some in regard to the correctness of my former statement.

The facts are as follows: that I caused the ground to the extent of the branches, under the trees in question, to be covered from a quarter to half an inch deep with the muriate of lime. I then gently shook the tree, and found, that in every case, where the worm fell on the lime it was destroyed; in some cases the worm would spin himself up several times, but finally would drop, curl up and die. The next season, not a worm was to be seen, nor has there been one since. Of course, I then thought, and do now believe, that this was owing wholly to the use of the muriate of lime.

If others have tried the experiment and have not succeeded, I cannot help thinking that they did not use the lime at the right season, and in the right way; I believe it should be used at the very time, or rather a little before, the worm is leaving the tree and going into the ground. The worm is then in that state when he is weak, and can be easily destroyed. The *time* I think, is of the utmost importance when the muriate should be used, and the ground should be well covered. As I only made one experiment, of course I have no means of judging the effect of the lime when used at a different season or in a different way from the time or manner tried by myself.

As a fertilizer, your muriate is already too well known, and you have received testimonials from far better judges than myself, to require anything from me on that point.

Hoping that the above will be a sufficient answer to your questions, I remain yours truly,

WILLIAM PLUMER.

P. S.—The time I used the muriate in my experiment was, I believe, from the 10th to the 15th of June.

☞ For sale by James Gould, 70 State St., or C. Young & Co., 118 State St.

EFFECTS OF HEAT UPON MEAT.

A well-cooked piece of meat should always be full of its own juice or natural gravy. In roasting, therefore, it should be exposed to a quick fire, that the external surface may be made to contract at once, and the albumen to coagulate before the juice has had time to escape from within. And so in boiling. When a piece of beef or mutton is plunged into boiling water, the outer part contracts, the albumen which is near the surface coagulates, and the internal juice is prevented either from escaping into the water by which it is surrounded, or from being diluted or weakened by the admission of water among it. When cut up the meat yields much gravy, and it is rich in flavor. Hence a beefsteak or mutton-chop is done quickly, over a quick fire, that the natural juices may be retained. On the other hand, if the meat be exposed to a slow fire, its pores remain open, the juice continues to flow from within, as it has dried from the surface, and the flesh pines, and becomes dry, hard and unsavory. Or if it be put in cold or tepid water, which is gradually brought to a boil, much of the albumen is extracted before it coagulates, the natural juices flow out, and the meat is served in a nearly tasteless state. Hence, to prepare good boiled meat, it should be put into water already brought to a boil. But to make beef-tea, mutton-broth, and other meat soups, the flesh should be put into cold water, and this afterwards very slowly warmed, and finally boiled. The advantage derived from "simmering"—a term not unfrequent in cookery books—depends very much upon the effects of slow boiling, as above described.

These are the views of Liebig and Professor Johnston on cooking meat.

For the New England Farmer.

LETTER ABOUT NORTH CAROLINA.

Raleigh—Capitol Grounds—Lunatic Asylum—The Severe Winter—Care of Animals—Roads—The Southern Pine—Method of procuring Turpentine—Probable extermination of the Pine.

Lexington, April 20, 1856.

HON. S. BROWN:—Dear Sir,—It is quite a long jump in time, as well as interval in space, between Weldon, N. C., Jan. 10th, and Lexington, Mass., April 20th. But time and convenience did not suffice me to write you again upon my Southern journey, and you will be obliged to content yourself with reminiscences.

When I wrote you from Weldon, I think I said little or nothing about Raleigh, N. C., the capitol of the State.

It is located, like a great many other State capitols, as near the centre as possible, without regard to business so long as it accommodates State purposes. The city is a mile square, and laid out in rectangles, each street being either north and south or east and west. The Capitol is a large stone building; its ground plan the Latin cross, and otherwise rather Greek in style, which ought to have cost about $20,000, and did in reality cost not less than $60,000; so are things done for states. When a state begins to spend and contract it is very likely to suffer financially.

Raleigh, as above said, depends upon the State business to support it, and is inhabited either by officials or men of wealth who like to be in sight of each other, for you know at the South, in the country, men are very apt to be a long way from sight of their neighbors. The city has appropriated several large squares for ornamental purposes, much in the same manner with Savannah,—none of which are as yet laid out and adorned; for the capitol grounds of about four acres, I made designs, but whether they will ever be executed depends upon the whim of a Legislature which may or may not be of the ornamental kind.

Here, too, is the first Lunatic Asylum in North Carolina. It owes its origin to the celebrated Miss Dix, who stuck to the North Carolinians till they appropriated the money. The building is very large and capacious and the grounds of three hundred acres very capable of improvement; for this too I had the honor and pleasure of prescribing, and I hope some day, under its efficient manager, Dr. E. C. Fisher, the estate will become as delightful as it ought to be. During the whole of our stay in Raleigh of a month, the ground was covered with snow and ice, and it hardly thawed the whole time, a condition of things that has not been known there before for thirty years at least. No man, accustomed to our care for cattle, could be here during such weather without suffering every time he went out, at the sight of the poor half or wholly starved creatures, deprived of their accustomed forest and town pickings and stealings by the snow, and for whom their masters neither had made nor could make any provision.

As no summer supply is laid in against the winter, when it comes with its cold and snow, the animals have to suffer. It seems incredible that in the South, to which we have been accustomed to attach ideas of warmth and comfort, we should suffer more from the cold than at home during ever so severe a winter as the past, but such is the lack of winter comforts, that it is literally true. I have sat for days in a room in a Southern hotel where all the fire I could make would not warm the air for ten feet around it.

Nor in such times do the beasts of burden suffer less. The roads are never *made*; they get a road by selecting the direction in which it is to run, and then dig some of the earth off the hilly places and cart it, with brush to keep the loam out of the water, into the low lands to fill up, and without the least care for ease of grade, or side drains for the removal of standing or spring water, consider the road made. Nor do they in numerous instances take even this pains; for it will more often be found that no digging has been done at all, but the line being selected, the people drive over it anywhere within ten rods, and suit themselves about the best place for animal and wagon, making a great number of tracks very confusing to a stranger, and not very desirable any of them. Where roads are so made they become mere canals for the passage of the water down the hill-sides, which settles in the hollows, and I have often in a few miles' drive, forded half a dozen ponds or streams that would rise above the hubs of the wheels. While the frost is coming out, such roads are absolutely impassable for loaded teams, and it is no rare thing for a carriage to get bogged even after a heavy rain. The badness of the road is also owing in some measure to the awkward, heavy, springless wagons in general use. It is well known to all those engaged in constructing roads, properly, that the wear and tear will be diminished one-third by the use of springs. Thus you see the miserable economy of this kind of management; the road is badly built, is always out of repair, is rendered worse by the vehicles being in their turn cumbersome and badly constructed, and as a result, demand the use of double or treble the team to haul them; cutting thus into the purse of the people, in a three-fold manner.

I mentioned in my last the manufacture of turpentine, &c., and how important it is to the States possessing the long-leaved pine. I did not, however, describe the method of making it. The long-leaved pine is a tree so unlike any Northern tree that it is almost impossible to describe it to the unbotanically scientific. It resembles our yellow field pine somewhat, but has leaves often twelve to eighteen inches long. These trees cover the sandy plains of South and North Carolina in millions, and yet at the present rate of consumption, must at no distant day entirely disappear; a plantation of these (by plantation, I mean the trees contained in any one plantation,) lasts about thirteen years from the time operations commence upon them, so that whilst they may be a source of profit to one generation, they will be lost to the next, thus killing the goose for the golden egg.

The process of working the crop is as follows:—a gash is cut into the tree near its bottom, hollowing below like a cup, but rising above to the outside of the bark; the turpentine, or sap of the tree, runs down and is caught in the cup; every few days a negro goes out and scoops out whatever has collected, and as the sap runs less freely, gouges or scores the trunk for a line perpendicular to the middle of the cup-shaped gash at bottom, out to a line perpendicular to the side of the same; of course, the sap runs out afresh at the new wound, and is collected as before. This process is continued on all sides of the tree, till it is exhaust-

ed; this is the crude turpentine, which is carried to the distillery and distilled, giving pure turpentine and rosin. The trees are then cut down and piled, as we pile for charcoal, over a hole in the ground, covered with earth, and then set on fire; during their burning there runs out into the hole in the ground another pitchy substance, tar. The Hard or Southern Pine lumber is derived from the same tree, cut before all this process has been passed through, though, sometimes, I believe the tree is used for lumber after the turpentine has been extracted.

Were it not for the practice of allowing the hogs to run at large in the forest, as I mentioned in my last, these trees would restore themselves, but the hogs eat the mast or seed, and the tree is thus fast disappearing; and countless as their numbers seem, no distant day will see the end of the Southern pine, unless the Legislatures of the respective States pass some forest laws restraining its destruction and promoting its growth.

Having thus described the North Carolina staple crop, I will leave the rice of South Carolina for a future number. I remain yours, &c.,

R. MORRIS COPELAND.

UTILITY OF MOLES.

Mr. George Wilkins, in the *Agricultural Gazette*, gives the following statement:—"The Journal of the Royal Agricultural Society affirms that in one year, and every year, full 60,000 bushels of seed wheat, equal at this time to nearly £30,000 worth, are destroyed by wireworms. If 60,000 bushels of seed are destroyed, full 720,000 bushels of crop are prevented, equal in value, at this time, to upwards of £300,000 a year! If farmers, instead of killing moles, partridges, and pheasants, would protect them, 720,000 more bushels of wheat would go every year into the English markets; but the creature designed by a kind Providence to perform the chief part of this immense good is the mole. Some years since I had two fields, one of which was full of wireworms, and the other was infested with them to the extent of more than one-third part of it. My crops failed for the first two or three years the land was in my possession, but every year afterwards they improved, and at length rapidly. The cause was this:—I bought all the live moles I could obtain, first at 3s. a dozen and then at 2s., and turned them down in my fields; and one year in which I had 8 quarters of barley on an acre and nearly 7 quarters of wheat, the moles were at work all the summer, and in such numbers that, as I walked among the growing crops, the ground under my feet was like a honeycomb; but that was the last year I had a mole on my land; their work being done, their food—the former pests to my crops—being all consumed, the little innocent workmen, who had performed for me a service beyond the powers of all the men in my parish, migrated to my neighbors to perform for them the same kind or benefit they had for me; but of course, death met them at every move, and soon the whole colony was destroyed. I will add that now I will allow all farmers in this country to turn upon the globe I myself occupy, all the moles from their farms they can bring, being convinced they would do me no injury; but, if I happen to have a wireworm, they would by destroying him do me good."

INDIA RUBBER IN A NEW SHAPE.

A New York correspondent of the Boston *Journal* gives the following account of a new application of India rubber, which promises to be of much importance to the world:

Among the recent applications of India Rubber, none are so remarkable as the manufacture of what is called "Hard India Goods," into which the rubber enters most largely. We have in this city a company called the Beacon Dam Company, which is devoted to the manufacture of this class of goods. By a process that originated with Mr. Chaffee, coal tar is mixed with the rubber, and the compound makes one of the most solid, elastic and elegant articles that can be found in the market. It resembles polished stone, is as black as coal, needs no finish, and has of itself a hard and exquisite polish as it is possible for any metal to bear. There seems to be no end to the articles into which it can be made. Canes of the most elegant form and appearance are constructed out of it, and are as tough as so much steel, while they have all the elasticity of whalebone. Cabinet work, inlaid and mosaic, ornamental to the parlor and the chamber. Spectacle bows and glasses for the eye, are made so light as to be no annoyance, while their elastic character cause them to sit firm to the head; opera glasses, castors, sand stands, ink stands, brushes for the hair, that cannot be harmed by hot water, tape lines, pen holders, pencil cases, cigar cases, government boxes for the army and navy, government buttons, and an endless variety of articles, are thus made, and the articles are of a most elegant character; syringes of a novel form and character; machines for oiling cars and engines, on a new principle, indicate that this new use of rubber is to work a complete revolution in the arts and manufactures.

But one of the greatest applications of this new rubber manufacture is the new telegraph wire that is made from it. It needs no poles, as it is laid in the ground. It needs no covering; a trench of a few inches is dug; the rubber telegraph wire is put in and covered up; the wire is enclosed with the rubber; no storm render the wires inoperative; no insect sever; no rust corrode. It would appear fabulous if I should state the miles of this wire that have already been engaged, and the goods cannot be made to meet the demand.

The government of the United States is now the best customer of the Beacon Dam Company. The call for the Navy and Army button is immense; the article is elegant; the naval button has on it the motto, "don't give up the ship." And so tough are these rubber buttons, that if one is placed on an oak plank and pressure applied, it can be sunk clear into the plank, and will come out unharmed; and the government shaving boxes, which are about three inches in diameter, are so strong that a man weighing 200 pounds can press his whole weight on one of them, and not break them. Gun handles, sword handles, and other military implements, are constructed from this material. They are cheap, elegant, enduring. A walk through the sales-room of this company is one of the marvels of New York, and if any of your readers have the least curiosity to see one of the most wonderful applications of India rubber that the world has ever seen, they can be gratified by visiting the wholesale

rooms of the Beacon Dam Company, located at No. 63 Maiden Lane, and they will be gratified. The Company retail no goods, but keep full specimens on hand, and the President of the Company, Col. I. H. Rich, so long known in Burlington, Vt. as one of the most enterprising of the citizens of that beautiful city, will show the curious, the marvels of this new trade.

"MUCK IS THE MOTHER OF THE MEAL CHEST."

No truth ought to be better established than this old homely one of the Scotchman, and yet, strange to say, comparatively few have yet received it in its broad signification; while a large majority reject it altogether. And, although no modern discovery has been of such essential service to the farmer as this, that *muck* is not only one of the best substances in nature to gather up and preserve for future use other valuable agents, but it is in itself a powerful fertilizer, many will not only refuse to avail themselves of its benefits, but discourage others from so doing.

Entertaining these views, we were gratified to find *Swamp Muck and Salt Marsh* the subject of discussion at the *American Institute Farmers' Club* in New York city, on Tuesday, the 15th of January. Mr. R. L. PELL, renowned as the most extensive fruit culturist in the world, and President of the club, was presiding. Mr. Secretary MEIGS read a a paper from the London *Journal of Arts and Sciences*, upon a patent plan of preserving meats and vegetable substances used for food; and among the gentlemen present to whom we were introduced, were Judge LIVINGSTON, Mr. T. W. FIELD, of Brooklyn, a gentleman extensively engaged in pear culture, Dr. WATERBURY, of Conn., Mr. WYNKOOP, and others. Our friend, SOLON ROBINSON, the agricultural editor of the New York *Tribune*, was on the spot, pen in hand, which has enabled us to give below something that was said on the occasion.

Mr. FIELD, of Brooklyn, said all that was wanted to make swamps productive was to relieve the surface of stagnant water. The general use of muck, as commonly applied, has been deleterious, and it is difficult to induce men who have once made such a mistake to try again in a proper manner. But he finds nothing so valuable to mix with guano or potash, or any other concentrated manure, as decomposed muck. He supposes there is one-thirteenth part of this State now lying idle as worthless swamp. Here good garden land near New York is worth $300 or $400 an acre, and yet the swamps are everywhere lying idle.

There are millions of loads of muscles within a mile of Brooklyn, not one pound of which is ever used, while all around men are complaining of the failure of crops on light, sandy land.

Mr. BROWN, being called upon, said he found encouragement in thus meeting a farmer's club in the heart of a great city; since, even in the country itself, the farmer's occupation and interest is neglected more than any other. It has never had the fostering care of government, or of large associations of men who had money to appropriate, or of testamentary donations, such as are every day made to colleges, libraries, and schools, but has been left to work its own way up against an accumulation of prejudice and ignorance which would have crushed any other calling than that upon which life itself depends. He therefore thought it a matter worthy of especial notice, that in a city like this, amid all the busy pursuits of life, a club of men can be found devoted to the purpose of discussing and bringing before the world such useful matters as emanate from this society; for however little they are studied in the city, they are widely read in the country, and commented, and acted on, by those most deeply interested. He had often republished the questions discussed in this room to the advantage and gratification of New England farmers. He thought the subject had been just called up, upon which Mr. Field had made some useful remarks, one that could not be talked about too much. The people need line upon line to awaken them to the importance of swamp draining, and the use of muck as a fertilizer.

On the subject of salt meadows, he said he thought their occupation by the farmers of western Massachusetts of doubtful utility. If the hay produced on them were used for litter, for mulching, for compost heaps, and the best of it as an agreeable change in fodder, and to enable the farmer to keep more stock than he could otherwise keep on his upland grass, it would then be a valuable acquisition to the farm. But wherever salt or marsh hay is accessible, two principles seem to have universally prevailed. *First*, to secure all that it has been found possible to obtain, and *secondly*, to carry away and sell all the best grasses of the upland farm. The time and labor expended in cutting much of the marsh grass was at the expense of the growing crops, so that short harvestings of corn and potatoes and roots were the common result. Ditching, draining, breaking up and re-seeding, and most of the improvements which ought to be annual on the farm, were pushed aside in order to permit all hands *"to go to the marsh."* The swamps near home were looked upon as valueless, or only served to keep the hills together, or were the imprescriptible right of the nocturnal serenaders, the frogs. And he thought now, that very few persons owning and improving salt marsh, had ever reclaimed a swamp, however near it might be to the buildings of the farm!

If this were all, however, he said, the error might be tolerated; but the evils of the second part of the drama are more disastrous than the first. The oxen, cows, horses and sheep are kept in a great

measure upon the salt hay, in order to save the English to sell, and this they will not constantly and freely eat, unless when kept down somewhere in the neighborhod of the starvation point. In consequence of this, their droppings are cold, watery and inert, and they generally remain through the year, neither fit for the dairy nor the shambles, enjoying nothing themselves, and a lean and gaunt reproach to their owners. Such is the system,—and instead of elevating the farmer and affording him a profit, its tendency is constantly to impoverish and discourage. The hardest working farmers he ever knew were those owning and cutting salt meadows.

As to the use of muck as a fertilizer, he thought comparatively few as yet properly appreciate it, or well understand its composition and powers, and the true way to use it. The muck of our swamps is a mixture of mineral and vegetable matter,—but principally the latter. It is formed by the growth of moss and annual grasses or rank aquatic vegetables, of dead leaves, rotten trunks, and branches of trees, where in some cases, a heavy vegetable growth has been burned and the ashes left, together with the refuse mould and mineral matter of the hills, washed down through long ages into the common receptacle—the swamp. Here then are the materials we need as fertilizers stored up for us in reserve like the coal beds, and waiting for light and air to become the food which our plants require. DANA says, it is highly concentrated vegetable food, and that when the state in which this food exists is examined, it is found not only partly cooked but seasoned. Peat ashes contain all the inorganic principles of plants which are insoluble. Twenty samples of peat examined by Dr. C. T. JACKSON, afforded an average of 72 vegetable matter, 24 ashes, in 100 parts dried. DANA also says—and he has had ample experience to enable him to judge correctly—that equal bulks of peat and cowdung do not materially differ; that the salts of lime are about the same, while the alumina, oxide of iron, magnesia in the selicates added to the salts of lime, make the total amount of salts, in round numbers, equal that of cowdung. That, "departing from cowdung and wandering through all the varieties of animal and vegetable manures, we land in a peat-bog. The substance under our feet is analyzed, and found to be cowdung, without its murky breath of cow-odor, or the power of generating ammonia." The subject of muck as a fertilzer has received attention from many able minds in this country, and in England, and all accord in the opinion, that it is among the most valuable materials for increasing the fertility of the farm. Considering its nearness to the place where it is wanted to be used, and to the fact that it is a part of the farm itself, which was not paid for at the rate of $50 per ton, it ought to stand first in importance to the farmer, of all the fertilizers he uses,—or at least side by side with the droppings of his stalls.

Mr. Brown concluded by an earnest appeal to the farmer to experiment more carefully, and to use more extensively, and in so doing they would come to the conclusion that Muck is, in reality, the Mother of the Meal Chest.

For the New England Farmer.

GIFFORD MORGAN HORSES.

An inquirer in the last *Farmer* wants light on this the best branch of the Morgan race of horses.

The original Major Gifford was raised by Ziba Gifford, of East Randolph, Vermont, in the same neighborhood where the first horse ever known as "Morgan" was owned and kept, and I think, died, by Justin Morgan. (Hence the name "Morgan" was given the horse.) Major Gifford was a noble animal, and his stock is much sought after by breeders in the eastern part of Vermont. He was afterwards owned by C. Blodgett, Chelsea, Vermont, and thence taken to New Hampshire, (Walpole, I think,) and died at an advanced age. His stock is very generally of a beautiful chestnut color, very plump or well proportioned, often quite gay, and invariably possessing great power of endurance.—The old "Green Mountain" formerly owned by Silas Hale, of Royalston, Massachusetts, is of his sire, and though now at an advanced age, and by his excessive use is now unfit for trotting on the course, yet makes a fine appearance, and leaves abundant marks of his superiority of blood, in the splendid colts of his sire. He is now owned by a joint stock company of farmers in Williamstown, Vermont, and probably possesses the traits of "Major Gifford" as much as any other horse of the same stock.

There are "Gifford Morgans" in every section of New England, and in various places at the West, each claiming various degrees of kindred to old "Major Gifford" and like other horses claim to possess "*more Morgan blood than any other horse now living.*" "Major Gifford" was sired by the original "Morgan" mentioned above, and one of the four or five stock horses raised from a "Morgan."

Ferrisburg, Vt., May 30, 1856. P. J.

LOG HOUSES.—A correspondent of the Boston *Journal*, writing from Minnesota Territory, gives the following description of a superior style of log houses, which may interest persons going West:

"Nothing is less attractive in appearance than an ordinary log house, the logs being tumbled together as fast as possible, and then plastered over with mud. But give to a Swede the making of a house from logs, and he turns one out which makes it very doubtful to me whether it is not really the best house that can be made of wood. The reason of such a difference is, that in their own country, as they tell me, their houses of wood are never constructed in any other manner. With a few simple tools and principally the axe, they hew down the logs to a thickness of about five inches (making of them in fact a sort of plank) and then joint, pin and fit them together with a nicety which our best carpenters would find it hard to equal, and which

makes them as impervious to wind and cold as the walls of a well caulked ship. In the way of *rural architecture*, this is something we do not read of, but it is nevertheless as comfortable as it is unique, and in appearance even is behind no other way of putting wood together that I have seen."

EDUCATION BETTER THAN WEALTH.

Experience has often taught the lesson that the children of wealthy parents are ruined by their wealth, while children reared in abject poverty, by the stern discipline of their early years, acquire habits of application and energy and self-control, which qualify them for eminent success in the stern struggles of life. The following incident, referring probably to Judge Collamore of Vermont, is in point:

"I remember," says the late Postmaster General of the United States, "the first time I visited Burlington, Vt., as Judge of the Supreme Court. I had left many years before, a poor boy. At the time I left there were two families of special note for their standing. Each of them had a son about my own age. I was very poor, and these boys were very rich. During the long years of hard toil which passed before my return, I had almost forgotten them. They had long ago forgotten me.

Approaching the court-house the first time in company with several gentlemen of the bench and bar, I noticed in the court-house yard, a pile of old furniture about to be sold at auction. The scenes of early boyhood with which I was surrounded, prompted me to ask whose it was. I was told it belonged to Mr. J. 'Mr. J.? I remember a family of that name, very wealthy; there is a son too; can it be he?'

I was told that it was even so. He was the son of one of the families already alluded to. He had inherited more than I had earned, and spent it all; and now his own family was reduced to real want, and his furniture was that day to be sold for debt. I went into the court-house suddenly, yet almost glad that I was born poor. I was soon absorbed in the business before me. One of the first cases called originated in a low drunken quarrel between Mr. H. and Mr. A. Mr. H., thought I, that is a familiar name. Can it be? In short, I found this was the son of the other wealthy man referred to. I was overwhelmed alike with astonishment and thanksgiving; astonishment at the change in our relative standing, and thanksgiving that I was not born to inherit wealth without toil.

Those fathers provide best for their children who leave them with the highest education, the purest morals, and—the least money."

THE WINCONSIN FARMER, published monthly at Madison, by Messrs. POWERS & SKINNER, is an excellent paper—printed well, and its columns filled with practical and well written articles. It is a credit to the West.

HOWE'S SEED SOWER.—Only a single machine has been made; this is in the hands of practical farmers for thorough trial. Others will be manufactured as soon as one or two improvements which have been suggested can be more completely tested.

MANUFACTURE OF FISH GUANO.

At a late meeting of the Boston Society of Natural History, Dr. Charles T. Jackson, by request of one of the members, gave an account of the method now employed by the Narraganset Fish Guano Company, in the extraction of oil from Menhaden, and of converting the residual matter into a substitute for guano. We find the following report of his remarks in the *Traveller:*

He said that the manufacture of oil, and of artificial guano from fishes, had long been practised in France, where the fish called Merlan was employed for this purpose, and yielded but one and a half or two per cent. of oil; while the Menhaden is a much fatter fish and produces oil more abundantly. In France the fish cake, remaining after the extraction of oil, is dried at a steam heat, and is then ground fine and packed in air-tight casks for sale as a manure.

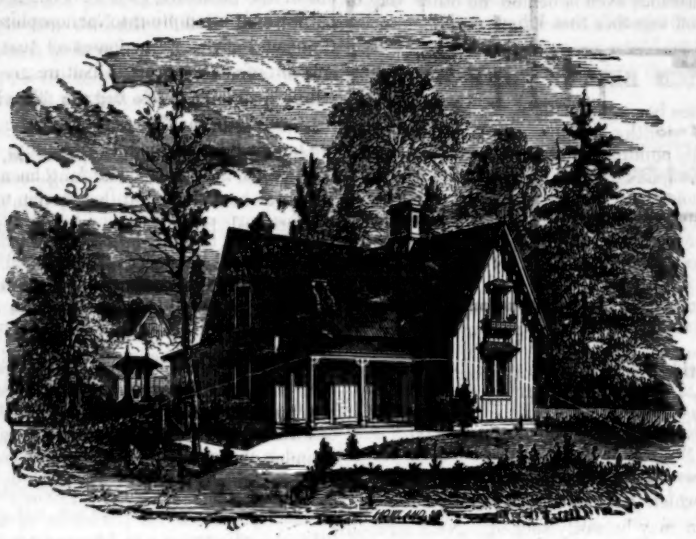
The Narraganset Company are engaged in similar processes, in the conversion of their fish cake into manure. They first steam the fish, then press out the oil, and afterwards dry and grind the remainder, mixing some gypsum, limestone, or earthy material, in order to render the grinding more perfect. Sometimes they add sulphuric acid to the fish cake, and convert the bones of the fish into sulphate of ammonia and humus, according to the method first indicated by Dr. Hare, of Philadelphia. In case this method is employed, the acid fish cake should be ground with limestone, when the excess of sulphuric acid will form sulphate of lime, and render the addition of gypsum unnecessary.

It has been proposed to add a certain proportion of peat to the fish cake, during the operation of grinding it, the peat acting as an excellent absorbent of ammonia, and as an antiseptic. This is applicable to the fish cake that has not been treated with sulphuric acid.

Properly prepared fish cake is fully equal to guano as a fertilizer, and it can be prepared at a much lower cost than guano can be brought from the coast of Peru. There are doubtless many places on our coast, where fish can be obtained in adequate quantities for the manufacture of this manure.

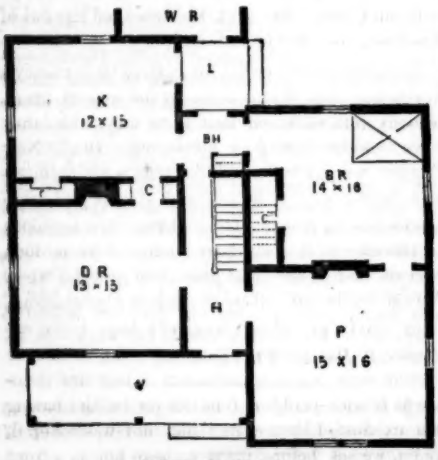
GOOD COWS.—Mr. J. B. Philbrook, of Hardwick, Vermont, has two cows of the native breed, (one of them may be slightly crossed with the Devonshire,) from which he made and sold six hundred lbs. of butter last season, besides supplying his family of two persons with milk and butter. I was at his house to-day and he showed me a tub, containing twenty-two and a half lbs. of beautiful butter, which he had just churned from eight days' milk, being the first the same two cows had made since their calves were taken away this spring. What is remarkable in this case is, that his dairy woman is his mother, who is *ninety-four* years old. She never keeps a *hired-girl*, and her boy, the said J. B. P., who is now nearly seventy years old, does not intend to marry while his mother can do her work.—S. D. KIMBALL, *Barton, Vt., April 1st*, 1856.

☞ If you would not be forgotten as soon as you are dead, either write things worth reading or do something worth writing.



A BEAUTIFUL COTTAGE.

This is another of those tasteful, convenient, and every way agreeable designs from the Messrs. *Cleveland and Backus' Work on "Village and Farm Cottages."* We have heretofore spoken of the excellence of this work, and as we look on its fair and attractive pages again, we cannot help wishing that every person about to build should have a copy of it before him. A single glance at the features and finish of this cottage would show to the passing observer, that the owner was both able and willing to consult his tastes as well as his purse.

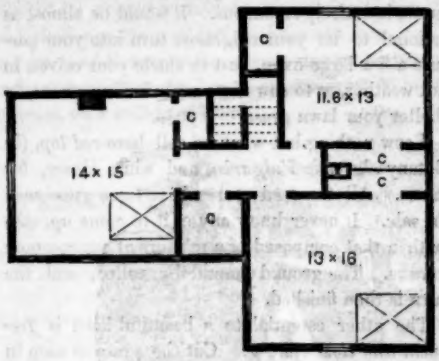


FIRST STORY PLAN.

The arrangement needs some explanation. The stairs, starting just back of the parlor-door on the right side of the hall, land on a platform, six feet above the floor, from which they return over the bedroom closet. At the rear of the landing, a partition crosses the hall, with a door at the side of the staircase. The cellar flight, starting in the back hall, goes down under the main stairs, that part of it beyond the platform being incased. The back porch is open, and the wood-room is beyond it, with kitchen-pantry, and other conveniences.

In the second story, the stairs land over the partition between the parlor and bedroom. There are two closets between the chambers at the right of the hall—one for each. There is a small one also in the back chamber beyond the stairs. There is a large closet in the hall for bedding, etc., and a small one in the left-hand chamber. If needful, this room may be divided in the centre, and a portion of the hall closet devoted to the front half.—The chimneys are of brick, and topped out with the same. The small dormer windows in the roof are intended for ventilation as much as for light. But they are decorative features also. The window caps are of plank, supported on simple brackets. The front gable window has a flower-balcony. The verandah is solid and plain, and is so finished as to show its construction. Sawn brackets of solid plank adorn the gable cornices, while the extended rafters are made to show along the eaves.

The first story is nine feet high. The second is like those last described.



SECOND STORY PLAN.

Though this house would not be out of place on almost any village lot, it is especially suited to one somewhat irregular in surface or outline. It is well fitted for a corner house, the fronts, seen in the engraving, showing on the two streets. In any event, the lot on which it stands should be of good size.

This plan may be easily spoiled. No alteration should be attempted without good advice. Some practical man may perhaps object to its irregularity. He may wonder that one part of the house stands back of the other. If he prefer the square, dreary, double house, so common formerly, and seen sometimes still, his wish is easily gratified, and for a model he can take a packing-box.

The cost of this house is $1,625.

For the New England Farmer.

POTATOES AGAIN.

MR. EDITOR:—Every one holds very tenaciously to his own judgment in all things, potatoes not excepted. Each farmer knows how much he expects, and how much he raises from an acre of ground; and if the product exceeds his anticipations, all well; if not, why the season was not favorable. Himself excused, he, in the prevalently becoming assertion, says, with all the swell of a Dutch sage,—"Farming don't pay." As *don't* is self-evident to most persons, and especially to intelligent observers, under the means, further remarks are not needed.

Farming requires study, money and a disposition to try the soil. In East or West the same necessity is found of understanding the applications for different localities and soils. Improvements are necessary in all that hands can be placed upon.

And the practice of farming is better conducted by intelligent men than by the antiquated booby whose chief end is to work hard and drink cider—and who lives on the same place that his father wore out before him.

I am of the opinion that good, fair, fully ripe, and middling potatoes, planted on well prepared ground, will insure a good and respectable crop. Nevertheless, yet notwithstanding, if—. Enough.

W.

For the New England Farmer.

CHEAP LUXURIES—LAWNS.

BY H. F. FRENCH.

Without attempting to philosophize upon emotions of Beauty, we may assume that the contemplation of some objects in Nature gives pleasure to all, in a greater or less degree. This idea of Beauty seems in some degree innate or natural, and to be independent of the idea of Utility.

A leopard is more beautiful than a donkey, and a rose is more beautiful than a potato, unless to a half-starved Irishman, though the donkey and the potato be the very types of Utility, as the leopard and rose are of mere Beauty. All persons, however uncultivated their taste, seem pleased with *cultivated* nature, if the expression be allowable, such as lawns and hedges, and beds of flowers, and similar embellishments of artificial grounds, though many persons entirely overlook the natural beauties of forest, and river, and mountain, which have surrounded them from childhood. It is, perhaps, because the one comes to them as a surprise, and so attracts the attention, while the natural surroundings of their youth had never such novelty as to call for especial notice. Beauty, like the vital air, has surrounded them always, and been inhaled with every breath unconsciously, and doubtless, like this same air, would be somewhat missed were its existence to cease. This natural taste increases indefinitely by cultivation, and every man who has a house and land, desires at once to make it beautiful to those within, and attractive to those without.

Extravagant expenditure about our houses is the besetting and somewhat peculiar sin of Americans. The man who even builds a house, without pecuniary embarrassment, by reason of inaccurate estimates at the outset, or a gradual yielding up of his common sense to the desire to make a display of his taste, such a man is rare; but the man who not only builds a house, but also undertakes landscape gardening, and lives to a respectable old age out of the alms-house, would be a curiosity.

Yankees are proverbial for getting their money's worth, but that is only done in the way of *trade*. Nobody gets worse cheated than they, when they leave business and go a pleasuring. In all New England we pay too much for pine wood architecture, in the way of houses and stables and ornamental fences, and the like, and too little for those ornaments which Nature so readily offers us, such as lawns and hedges, and grand and graceful trees. We can see in any village of moderate pretensions, many dwellings where hundreds have been expended in the poorest attempts at the Gothic or Grecian style, while all around is as bare and desolate as a brick-yard, the funds of the builder having been exhausted by the time the roof was covered. Again, we see before many a cheap house, a front

yard fence of structure as elaborate as the figures on a blackboard made by the first class in trigonometry, and many a man can afford to pay a carpenter for building a white pine, white painted summer-house of boards and laths, whose means some how completely give out, before he can get a single evergreen tree, or a single vine, to cover the nakedness of his land.

There is a limit to every man's means. Even Queen Victoria, whose establishment, including husband and children, is economically managed at the annual cost of about five millions of dollars, is obliged to call on Parliament for occasional extra allowances, so that, with rich or poor, the question is how can limited means be made to afford the most of the necessaries, comforts and luxuries of life. I commenced, with the intention now, when we all, by opening our eyes, can at once test the matter, of suggesting what are the cheapest as well as most beautiful surroundings of our country houses.

And at the head of the catalogue, first, second and third, like action in oratory, I place *Green Grass.* Surround your house with grass, or a lawn in front, at the sides, any where there is room. No matter whether the space be acres or feet, nothing is so beautiful, from the opening spring to the close of Autumn, as the green grass. But cheap and common as is the grass, it is seldom that we see even a small enclosure kept green through the season.

In England, beautiful lawns are easily preserved, for the climate is moist and equable. There, where the climate is, on the whole, milder than here, the Indian Corn will not ripen for want of the burning summer heat of the sun. Here, the same clear sun that ripens the corn, at the same time shrivels the grass, unless some care is bestowed upon the preparation of the soil, as well as the keeping of the lawn. Still, as I said, a lawn is our cheapest luxury. Two things are essential to a beautiful lawn. The first is *deep culture* of the soil, so that the roots may strike down, where they can, in the dryest time, find moisture. On my own place I subsoiled the land, which is sandy, to the depth of sixteen inches, and planted it with potatoes, the year before sowing it. It has in the six years since it was sowed, once or twice been dried in spots in August. Had it been spaded thoroughly to the depth of eighteen inches, it would never have changed its verdant hue. Every man must judge for himself, according to the nature of his land, as to the depth of tillage required. Deep tillage is the one thing needful at the start. The soil need not be very rich, but it should be thoroughly pulverized, cleared of all noxious grasses, and perennial weeds, such as white weed and other cumberers of the soil.

Then sow in spring or fall with grass seed, and nothing else. The idea, which is common, of sowing a few oats or other grain, just to shade the grass, is entirely erroneous. It would be almost as rational to let your neighbors turn into your pasture a few large oxen, just to shade your calves, in hot weather, as to sow these rank feeding grains, to shelter your lawn grass.

I sow nothing but what we call here *red top,* (in Botany *Agrostis Vulgaris,*) and white clover, for lawns. All the seed stores have *lawn* grass seed for sale. I never knew any of it to come up, other than that composed of a mixture of our common grasses. The ground should be rolled, and the lawn is then finished.

The other essential to a beautiful lawn is *frequent and close cutting.* Cut the grass as soon in the spring as the sharpest scythe will clip it, long before it begins to head, and keep it as short as possible through the season. I have found four cuttings in the season to be sufficient for mine, but in most places, perhaps it might require more.

We occasionally see, in travelling, some spot before an old house, where sheep or horses have grazed at their pleasure, which presents the best idea of a nicely shaven lawn, that we find. To keep the lawn perfectly even, it should be rolled with a heavy roller after each cutting, but at least, it should have a thorough rolling once or twice in the spring, to crush down any irregularities made by the frost, or small stones, or other objects which may be in the way of the scythe.

An occasional top-dressing in the fall, and in two or three years with fine compost, or superphosphate of lime, or ashes, will be sufficient to preserve the fertility of the soil.

Having laid out the lawn, be careful not to crowd it with trees, a few fine specimens of the elm, the Scotch larch, an occasional group of white pine, a hemlock now and then, or a group of them, a trellis with a rose or honeysuckle, a few flowering shrubs, according to the extent of the ground, may be added, but not so as to interfere with each other, or the *open* impression of breadth and space, which is essential to the true idea of a lawn.

Then, with a well-kept hedge of Buckthorn or Privet, and walks neatly kept and evenly cut through the turf in graceful curves, we have, at the smallest possible cost, a perfect "thing of beauty," in its way, which Solomon in all his glory could not equal.

In the March number of the *Farmer* for 1852, I wrote of hedges. My Buckthorn hedge, about twenty rods in extent, which is there named, planted in 1849 and '50, has now arrived at the dignity of a fence. This spring, the boards which had protected it were removed, and the hedge, about three feet high, cut square and even, I am not ashamed of. A single invisible wire runs along the top of it, for protection against cattle in the street, and thus

far proves sufficient. I defy the art of man, with wood or metal, at any cost, to make a fence so beautiful for a country residence, as a living hedge; and I challenge the world of gardeners to form, by the culture of flowers even, a landscape so permanently and satisfactorily lovely, as the quiet, humble grass, on a well-kept lawn.

For the New England Farmer.

PRESENT OF A PAPER--BARNS.

Mr. Editor:—A few weeks since, I received a number of your paper containing a receipt making me an advance paying subscriber for one year. My present purpose is not the finding out of my friend, who choses to remain incognito. I leave that to time and chance. But I most certainly *shall* find him out.

The present of a *paper* is at once neat, chaste, useful and unexceptionable. Nothing can be more so. It may be received as a gentle hint that a little more reading may be good for us. That to be a little more intellectual will make us better and more *lovable*. To a farmer it may intimate that a little more learning is no dangerous thing. That a little more use of books, or even the *pen*, need not unfit us for using the other implements of our art.

The *N. E. Farmer* on my table, falls into the good company of the *Maine Farmer*, the *Working Farmer*, &c., and no jealousies are yet engendered by the meeting. The elder installed members of the group are not ashamed of the venerable one last in place. Not the least difficulty is apprehended.

A present of a good paper to a friend is yet too much of a novelty. Such an act has sometimes been perpetrated in Maine, and in no instance, to my knowledge, has the least trouble grown out of it.

Being a farmer, and I may be allowed to say, something of a reading one—not much of a writing one—I am often sorely tempted to drop in a few words for *the papers*, when I fancy that the *idea* in a well-written article might have been carried a little farther with advantage. Though I generally manage to quiet such desires, yet the case *has* happened where I have indulged a little, and *may* do so again.

In No. 10 of the current volume, your correspondent, W. D. B., of Concord, has advanced some just and timely ideas on barns.

In the planning of all buildings, the mathematical fact should ever be kept in our view; that in economy of outer surface, the form of the square and cube are to be approached. In the ground plan for a barn, if the structure is to be a large one, the best practical width should be selected, which is from 40 to 44 feet; the best height, which will be found about 20 feet, little more or less; and extended in length to make your desired dimensions. But the point I wish to make here, is, that mathematical fact does not allow the economical builder to stop at the square and the cube, but to reach onward to the figure of the circle and the sphere.

In practice, with the materials mostly in use at present, barns may not readily admit the circular form. But for barns of medium size, we make an approach to the circle by adopting the octagon, which is free from valid objections.

Let us for a moment compare this form with the square. A barn 30 by 30 feet, 16 feet high, contains 14,400 cubic feet; an octagon of the same surface, making 15 feet on each of its 8 sides, same height, encloses 17,385 feet.

A barn 40 by 40 feet, 20 feet high, contains 32,000 feet. An octagon, 20 feet sides, same height, 38,624 feet. Here we see a clear gain of about one-fifth of the storage capacity.

For barns of larger dimensions, I have not given this plan much thought. They may be objectionable. For medium size there is no loss in space or convenience in cattle stalls, but a positive gain.—There is a clear gain in material and labor in the erection of a good, staunch frame, by choosing the octagon over the square. Beams and posts internally above the girts and scaffold flooring are unnecessary.

I disclaim being a mechanic or the son of a mechanic; but could give my *private opinion* to a mechanic, on the size and position of every stick of timber in the frame of a moderate sized octagon barn. Say a barn with storage for twenty to thirty tons of hay.

That such a barn is convenient and just the thing, I have daily, actual, positive proof.

Yours sincerely, C. C.

Foxcroft, Maine, March 17th, 1856.

REFRIGERATION.

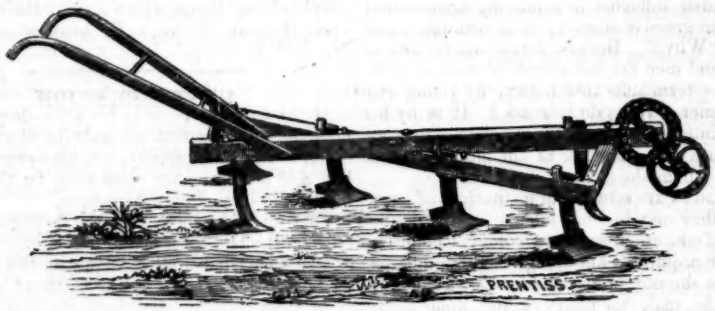
We are glad to learn that this safe and almost painless anesthetic agent is rapidly gaining favor among surgeons. By freezing the part, more or less, according to the case, many of the minor surgical operations, such as the removal of tumors, the extraction of teeth, the destruction of morbid growths and abnormal surfaces, can be performed with almost entire immunity from suffering, and with none of the danger attending the use of chloroform.

One of our city dentists is now extracting teeth in this way, to the great delight of those who have not the fortitude to endure pain, and who fear chloroform and other narcotic anesthetics. Nothing is easier than the application of the freezing mixture. Two parts of snow or pounded ice to one part of common table salt, makes a convenient frigorific. The ingredients may be mixed and placed in a linen rag, a piece of fine gauze, or a bladder, or in a hollow brass ball constructed so as to fit the part or surface, and held in contact a few minutes, or until the requisite degree of congelation has taken place. The gums are so thin that they are frozen by a few moments' application, when the rotten tooth, decayed stump, offending prong, or other remnant of *odontology*, may be taken out before the gums recover their sensibility. As many deaths have occurred in persons apparently in good health, while under the influence of chloroform, for the purpose of having a tooth extracted, we commend this plan to all who have teeth to be pulled, or who delight in dental surgery.—*Water Cure Journal.*

Cough in Horses.—We once had a horse that had caught a bad cold, and coughed so severely that he could be heard half a mile. All sorts of remedies were proposed—enough we should think to kill any good horse outright. These remedies were all rejected, although some might have proved useful, and the following course pursued. The horse

was in the first place very carefully and moderately used so to never produce perspiration. He was carefully blanketed when the weather was cold, (it was about mid-autumn,) or when he was in the least degree heated—he was kept constantly on green and succulent food, clover, roots, &c., and was supplied with plenty of the best water at all times. In a few weeks he was perfectly well.—It is an old saying that more depends on the nurse than on the physician, which was verified in this instance.—*Agricultural Exchange.*

PERFORATED OR SOLID BRICKS.—Some experiments have lately been made on the comparative sustaining power of patent perforated bricks, and bricks of the ordinary kind. In each case, a pier of four courses of the bricks to be tested was built in Roman cement, on the table of a powerful hydraulic press, and allowed at least twenty-four hours thoroughly to set. A light scale-board was suspended to the safety valve lever of the press, on which there were placed successive weights, until the pier of bricks on the table of the press was crushed. The number of weights was increased a quarter of a pound at a time—being equivalent to an increment of ten tons upon the press—commencing at 30 tons, this starting point being the effect due to the united weights of the lever and scale board. The pumps were worked very slowly, to eliminate the concussion produced otherwise by the inertia of the water. The first experiment was made with good ordinary brick in a pier of 18 inches square, built in four courses. This showed symptoms of failing with 110 tons, and was crushed with 150 tons. A pier of the same dimensions of perforated bricks began to crack with 270 tons, and was crushed with 350 tons.



KNOX'S PATENT GANG CULTIVATOR.

This is a combination of the Horse Hoe and Gang Plow. A row of small steel plows, attached to a diagonal beam, lift and pulverize the soil, producing a fine tilth. For covering grain, and preparing the soil for root and other crops, it is preferable to the harrow.

The following letter shows how the "Gang Cultivor" is appreciated by practical men who have tried it.

MR. EDITOR:—Permit me to recommend to you a new implement of husbandry, of no small importance. It is "*Knox's Patent Gang Cultivator*," manufactured by Messrs. Nourse, Mason & Co., Worcester, Mass. For putting in wheat, rye, oats, &c., I have never seen anything nearly equal to it. It leaves the ground light and level, whereas, a harrow leaves it heavy. I plow my ground with a side-hill plow, and if it is green sward I roll it smooth; put on my manure, and then put on the Gang Cultivator and go lengthwise of the furrows and then cross them, and then my land is nicely levelled and the manure well put under. I was fearful it would not do the work well with coarse manure, but I found it was just the tool for it. I think our crops will be enough better, and our land enough richer, to amply compensate for the expense of one. WM. EMERSON.

Auburn, Mass., May 29, 1856.

I have used one of the above-named Cultivators to get my grain in this spring and for pulverizing my land, and I do most fully concur in the above statement of Mr. Emerson. MARCUS BENNETT.

Auburn, Mass., May, 1856.

A PRACTICAL MISTAKE.—In a certain town in Vt., a fresh son of Erin and a young man who was familiar with the "beasts of our forests," were walking leisurely home from their day's labor when a little animal started off before them. "Och!" says Pat, "I'm sure its a Pacock or wild Tarky," and made after him, endeavoring to secure him under his coat, which he was carrying on his shoulder.—"Hold, pat," said his friend, "it's a skunk." "An sure, I'm after kaping the lad," said Pat, and threw his coat over the Pacock and clasped him in his arms! The scene suddenly changed, and the *wild tarkey* was off, while Pat was rubbing his face and crying, "Me eye's out! me eye's out! I'm kilt entirely."

For the New England Farmer.

WOMAN'S INFLUENCE.

BY SUSIE SUMMERFIELD.

"Woman's Influence! Why, how does it happen that the editor of the '*New England Farmer*' has inserted a short sketch entitled thus in the agricultural department of his paper?" exclaims some wise, elderly gentleman, who is a practical "farmer," while he sits in his cosy arm-chair, by his own fire-side; as he takes up this weekly paper, which ever proves a source of pleasure and profit to his circle of "loved ones." Then, the dear old gentleman rubs up his spectacles, and holds the light closely to the freshly printed page, as he mutters, "Humph! woman, woman! what has she to do with us men, in being interested in the progress of agriculture, that we should read of her influence here?" "O, father! perhaps this article may define the way in which she retards the progress of agriculture; for I never knew a *lady* to confess that she was interested in such a masculine and unrefined science, yet," exclaims a pert young farmer by profession, rather than by practice.

But let me assure you, my dear sir, that "Susie" believes that woman does, will have, and must have an unbounded influence in rendering agriculture a popular, progressive science; or in making it contrawise. "Why?" Because farms are carried on by men; and men are influenced by women, or *ladies*, if this term suits thee better, my young gentleman farmer. How, do you ask? It is by her becoming interested in, and by understanding what is the nature and character of the employment of those with whom she is associated in life.

Young ladies are sent to our institutions of learning that they may become adepts in the higher branches of education, such as Geology, Chemistry, &c. If she acquires a knowledge of these different branches, is she not prepared to assist, guide and influence the male members of her home circle, who are engaged in a science which needs instruction from such elevated sources? Her feminine taste naturally urges her to admire the works and wonders of nature, and if she becomes interested in the planting and sowing of seed, in the training and thriving of fruit trees, and in the cultivation of vegetables, as well as the development of the exotic, the opening of the perfumed rose-bud, and the training of vines which ornament the trellisses that beautify her portico, and which festoon above her window; can she not lend a new charm, a new interest to the tillage of the soil, which every day is becoming more and more popular, profitable and pleasant to the intelligent, sturdy sons of New England? If, instead of peopling the air with images, and building imaginary structures in fanciful dreams, she uses her expanded faculties in appeasing man's irritability, as he meets with his everyday vexations, and grants soothing sympathy unto him, as he performs his wearisome toil, will not *woman's* interest and influence be acknowledged, yea, welcomed by old and young farmers? When woman employs her knowledge of the mathematics in calculating the loss and gain there is in farm work, and in the products of the soil, as well as to merely discipline the mind, will she not receive the acknowledged confidence of every practical, judicious farmer in christendom?

Yes! she may become a sunbeam within the household of every farmer, which shall send cheering light deep down into the honest, generous heart of every yeoman in the land; or, by her listlessness, she may prove herself to be like a vapory cloud, which will dim the lustre of every star of promise that may shine within his horizon.

Let us see to it, then, that we lend sunshine to our homes, and that, by our *affectionate* words, and buoyant hopes, we chase away every shadow that frowns upon our households, and then we will coaxingly inquire of our farmer-husbands, and of our farmer-brothers, if *woman* cannot lend an influence to agriculture.

Sometimes we meet with *deceived, would-be-dignified* young ladies, who imbibe the notion that the occupation of farming is not so dignified as a professional or mercantile life. O! how erroneous is such an idea! Do you not call that pursuit dignified which brings a person into an intimate acquaintance with the most wonderful, elaborate operations of nature's laws, and with the most sublime, intricate beauties of creation; while it strengthens the mental faculties by continually awakening deep, calm reflection, and by keeping every one of man's energies fresh, vigorous and active? The farmer who swings the scythe or the sickle amidst the graceful heads of the ripened grain, or among the purple clover heads, which exude their fragrance upon the summer air, is far happier, and just as dignified as the pale faced merchant who handles costly fabrics with dainty fingers, or puzzles his brain over his "ledger" in his counting-room; or, as the restless mechanic in his work-shop. Though he is not able to count his gain in silver and gold dollars, with such rapidity, yet his expenses are fa less, and he continually receives by far the most interest paid in unalloyed happiness.

That man who looks with the feeling of paterni ty upon the buds of a plantation of choice trees, is as much elevated and as happy as the scholar or professor who rejoices in the birth of a new idea, or beholds his completed discourse, oration or plea, with intense delight.

Sometimes, when men begin to talk of the best methods of enriching their lands, of the fertilizing properties which compost contains, of the benefit which is derived by farmers carefully selecting their stock from choice breeds of animals, and of the most efficacious manner of fattening swine, ladies toss their curls, and send out looks of disdain from their bright eyes, and are shocked that farmers will be "*so vulgar*" as to talk of such topics in their dignified presence! But ministers discuss theological questions; moralists converse upon themes connected with their efforts for reforming society; lawyers speak of the best mode of argument; statesmen discourse upon politics, and the physicians announce the latest discovery in medical science, and talk of the different ingredients which form medical compounds; and the ladies all smile and listen, while they pronounce them very skilful, influential practitioners, since they are so interested as to talk about their different professions. Now, if agriculturists desire to become skilful operators upon their soil, must they not *talk too* about their business, and will not the gentler sex encourage them to do so? But is it vulgar to be interested in a science which engaged the attention of the "father of our country," Washington; and which is connected with the pruning and training of that tree, the falling fruit of which first aided the great philosopher, Newton, to discover the laws of gravi-

tation? Is it undignified to speak of that demonstrative knowledge which enables men to furrow the ground; and then to cover it with fields of luxuriant corn, with carpeted meadows of green grass, dotted here and there with fragrant clover heads, and trailed over with exuberant vines, bearing clusters of purple and golden fruit; all of which help to form the picturesque part of nature's beauties? Was that woodman unrefined, who wielded the axe which hewed those chips from the stately tree, that awakened a train of thought in his mind that enabled him to make that appropriate comparison in referring to children and parents, when he said "that the little chips were always nearest to the heart," and so he believed the little ones to be to the parent. No! my lady readers, he was one of nature's pupils, and she teaches naught but purity, and *heart refinement* in her lessons of wisdom.

Did not our Saviour select themes connected with the fields to discourse upon in parables, to vast concourses of people? Was it not a cornfield, which received the impressions of his holy feet as he plucked the silken ear to feed the hungry on the Sabbath day? Was it not a *garden* which was stained by Jesus' precious blood, when he was crucified for *us*, poor, blinded, helpless worms of the dust? Was it not a garden, filled with trees, laden with rich fruit and adorned with ambrosial fountains, which formed an Eden for our first parents? Was not agriculture the first science in which man was instructed, one which he was commanded to pursue? And yet, some call it unprofitable, undignified and unrefined, compared with the mechanical arts, and the different professions.

But ho, ye women and daughters of New England, of America, even, arise, and prove yourselves bright spirits which shall gladden homes, warm cheerless hearts, and inspire our young and old farmers with new zeal and new courage in the culture of the soil.

When we can number the noble trees which spring from little seeds that mysteriously float through the air, when we can calculate the flowers that the summer shower and the summer sun causes to spring into glad luxuriance from the generous earth, we may then, and not till then, be enabled to estimate the benefits which may arise when right minded, highly educated and sympathetic females begin to exhibit an interest and a rational knowledge of agriculture. Then, I believe the readers of the "*New England Farmer*" will not be surprised to read a few ideas upon "Woman's Influence" in the agricultural department. Will they, Mr. Editor?

REMARKS.—No, no! A few articles like this, written by one who, herself, adorns the farmer's home, and whose teachings spring from bright examples, *will* awaken many to a true sense of the beauty, propriety and dignity of rural life. This is good seed, madam, we will see that it is sown on good soil, and it shall bring forth an hundred fold.

CONDENSED EGG.—A process has been devised by Messrs. Thurgar, of the Albion Mills, Norwich, for drying eggs, so that they will keep good for any length of time. This is effected by evaporation. The yolk and white of the egg are exposed to a slow heat, and the moisture is thus driven off. The whole is then reduced to powder and packed up in tins. The material is not necessarily kept air-tight, but may be freely exposed to the air. The powder is used in the ordinary way as eggs are, being mixed with a little water, and is thus an excellent substitute for milk on long voyages, besides capable of being used for all cooking purposes in the same way as the fresh egg. The powder will keep any length of time without fear of deterioration.—*London paper.*

For the New England Farmer.

THE STUDY OF BOTANY.

"A standing objection to Botany has always been, that it is a pursuit that amuses the fancy and exercises the memory, without improving the mind or advancing any real knowledge; and when the science is carried no further than a mere systematic classification, the charge is but too true. But the botanist, desirous of wiping off this aspersion, should be, by no means, content with a list of names; he should study plants philosophically, should investigate the laws of vegetation, should examine the powers and virtues of herbs, should promote their cultivation, and graft the gardener, the planter and the husbandman on the phytologist. Not that system is by any means to be thrown aside; without system the field of nature would be a pathless wilderness; but system should be subservient to, not the main object of, pursuit.

"Vegetation is highly worthy of our attention; and in itself is of the utmost consequence to mankind and productive of many of the greatest comforts and elegancies of life.

"The productions of vegetation have had a vast influence on the commerce of nations, and have been the great promoters of navigation. As every climate has its peculiar producer, our natural wants being on a mutual intercourse, so that each distant part is supplied with the growth of every lattitude.

"Instead of examining the minute distinctions of every various species, of each obscure genius, the botanist should endeavor to make himself acquainted with those which are useful. You will see a man readily ascertain every herb of the field, yet hardly know wheat from barley, or at least one sort of wheat or barley from another."—*White's Natural History of Selborne*, 1778.

This last remark reminds us of an instance in our school days. With our good professor, we made many botanical and pleasure excursions out of the city. Returning once we were gathered about our teacher on the deck of the steamboat talking over our *specimens*. Professor W. took up one: "What is this young ladies?" One guessed, and another guessed, but none knew aught certainly. One exclaimed "O, isn't it pretty," another, "what an odd thing," and another, "I wish I had found one for my herbarium, I wonder if it's rare." Its sight seemed to revive some slumbering memory within me. I was sure I had seen it in the rural home of my early childhood. Yes! by patting memory a little I could call up just the spot where I had seen it—off in a neglected corner where things came up of their own accord. But between two I was undecided. There were tomato vines there that came up every year of their own accord. We called them "love apples," and when after careful experiment and many misgivings, we children pronounced them not *poisonous*, we considered

ourselves vastly sage. But on further consideration the plant in our teacher's hand belonged to another weed adjacent in situation. Yes, it was night shade! Our professor laughed. "You are not so far wrong—it is of the same family, but another individual, being a potato blossom." We never shall forget the difference between the three *solanums*.

Children might be greatly interested in the examination and explanation of the ornamental portion of our common and useful vegetables and herbs. Thus incidentally might a taste and love for scientific agricultural pursuits be engendered and encouraged in many who might otherwise turn from farming as an occupation, calling into use physical powers, mere practical matter-of-fact ideas, while the higher powers of mind and heart were little exercised. ELSIE.

Waukesha, Wis.

EXTRACTS AND REPLIES.

THE RAT AND THE SPARROWS.

MR. EDITOR:—On a pleasant day, last week, four gentlemen were standing in front of a house in South Framingham. It was noticed that three or four sparrows, near a pile of posts and rails, were acting strangely. Soon a large rat was seen to dart from the pile of rails towards the birds. They scattered, and the rat returned. The birds soon gathered again, and the rat again sprung towards them, but soon returned. One of the gentlemen went into his house for his loaded gun, and approached the rails. The birds again gathered, and the rat again appeared and chased one of them a distance of thirty feet, the other birds hovering about the rat. The birds then flew away.

Never having seen or heard of such a thing, I send the facts to you. Were the birds under a charm? Is it an uncommon thing? T. P.

Boston, May, 1856.

REMARKS.—The sparrows probably had a nest near the spot; the rat saw one or more of them, and fancied that they would make him a good dinner, but not having the instincts of the cat to watch and wait, he was disappointed. Most birds make a show of resistance when their nests are in danger. We saw two black-birds, the other day, drive a cow out of the rushes where their nest was undoubtedly bestowed. They would suddenly dart down about her, screaming, and sometimes nearly striking her on the back, until she deemed it best to retire from the rushes and the birds.

—

PRESERVING SHINGLES.

A few weeks since we published a recipe for preserving shingles, by soaking them in a solution of lime and salt, dissolved in water. A subscriber informs us that he laid several thousand shingles prepared in this way, about eight years ago, and he finds they are now loosening and coming off the buildings. The shingles themselves are perfectly sound, but the action of the salt has caused the nails to rust quite off. Our informant recommends lime alone, as it is sufficient to preserve the wood, and has no effect on the nails.

WINTER GREEN SWEETING.

MR. BROWN:—I send you a specimen of the Sweet Greening; a new variety with me, but may be an old one with you. The best apples to keep through the winter I ever put up.

Respectfully yours, JOSIAH BENNETT.

Westmoreland, N. H., 1856.

REMARKS.—The apples were received in good condition. They are well known to us, and are among the few fine late-keeping sweet apples. If kept in a cool, damp cellar, they are usually in excellent condition in May and June.

—

CATERPILLARS, SMOKING, PISMIRES.

We have six regular papers, and I believe the *Farmer* would be the last I should be willing to dispense with. There is a great deal of valuable information in every number; but there is one thing that I have not yet seen a cure for, that is the disgusting, filthy habit of smoking. If men will not hear to reason nor affection, I should be glad to see them obliged to yield to compulsion.

My husband uses bran, instead of powder, to kill caterpillars; it does not injure the trees. But he has not been able to keep the great black pismires from destroying pear buds; they took more than their share last year, and are determined to, this.

Fitzwilliam, N. H. MRS. M. A. K.

REMARKS.—If all the women were of the opinion of our correspondent, we think a great many pipes would soon go out. We will say for your comfort, Madam, that there is not a person about the *New England Farmer* establishment who uses tobacco in any shape.

—

BOOK ON UNDER-DRAINING.

Will you be kind enough to name the best and most thorough publication on under-draining of the soil, describing the uses, benefits and different modes. Perhaps you may remember that I wrote to you last winter for information relative to making a milk house with the waste water from an ice house;—well, I have got it all arranged, and it excells any natural spring that ever broke out of the ground. T. H. COLLINS.

Locust Lawn, Ind., 1856.

REMARKS.—MUNN's Practical Land Drainer is, perhaps, the best work on the subject in a small compass. It is published by Saxton & Company, N. Y.

—

BIG DANDELION.

I think I can beat that Bridgewater dandelion noticed in your miscellaneous department.

A dandelion recently growing on my father's farm, had one hundred and seventy-nine buds and blossoms, and three hundred and twenty-three leaves, and weighed thirty-three ounces.

Ashfield, June, 1856. WILLIAM F. BASSETT.

—

☞ We have just been shown a couple of eggs from the hen-coop of Mr. R. Munroe, of Burlington, Mass., weighing five and one-fourth, and six ounces each.

RANDOLPH OF ROANOKE.—One more is added to the "Randolph of Roanoke" stories, by a Virginian correspondent of *Harper*, who says it has never been published before:

When John Randolph visited Richmond, it was his habit to stop at the Eagle Hotel, and to drive his own horse around to the stables, on another street. On one of these occasions, while performing this latter operation, he was arrested by a country wagon, standing before the grocery store kept by one Simpson and his wife—the wife being the man of the two—and Randolph being impeded in his passage of the narrow street, ordered the countryman to get out of his way. The frightened fellow tried to do so, but Randolph was too impatient, and springing out of his wagon, put after the countryman, who took refuge in the grocery. As Randolph rushed in, Mrs. Simpson was coming out with a bucket of dirty water in her hand, and seeing the excitement of the intruder, demanded of him where he was going.

"Madam," said Randolph, in his shrillest key, "do you know who you are speaking to?" And then drawing himself up to his fullest *lankitude*, he exclaimed, "I am John Randolph, of Roanoke!"

"I don't care," said she, "who you are; but if you ain't out of this house in a minute, you'll get this bucket of slops in your face!"

Suiting the action to the threat, she raised the bucket, and would have dashed it over the statesman, had not his discretion, for the first and only time, got the better of his valor. Turning on his heel, he beat a hasty retreat, and left the woman mistress of the field.

BLOOD STOCK.—Who has full blooded Durham, Devon, Ayrshire, Hereford, or Alderney bulls?—*Green Mountain Farmer.*

We have a pure Alderney bull, 16 months old, for sale at a fair price. Hon. B. V. French, of Braintree, has Devons, and Charles B. Clark, Esq., of Concord, Mass., has Durhams.

LADIES' DEPARTMENT.

WHAT THEY SAY OF IT IN HAVANA.

This matter of shopping, as I have before stated, was the subject of our conversation during the whole evening. I intended to criticise these habits, but the feminine portion of the company revenged themselves with a pretty severe attack on the customs of the New York ladies. "You will never see in Havana," they said, "a lady leaving her house at ten o'clock in the morning, and spending the whole day in stores, talking to the salesmen, not only about the goods they wish to purchase, but also about the marriages that are going to take place, and inquiring who the parties are, what is their wealth, annual income, &c., and not returning until five in the afternoon." "And what do you think," said the old lady, "of the married ladies, who during a single promenade through Broadway, bring about the ruin of their poor husbands, who tremble at the thought of a change of seasons, which takes place four times a year, and whihh requires an entirely new assortment of bonnets, firs, cloaks, shawls, &c.?" "A lady," answered the youngest girl, "can go out in Cuba with a dress, costing perhaps only three dollars, provided it be tasteful, while in 'the North,' according to what I have been told, it is necessary always to wear expensive things, as the cost, and not the taste, is what is generally attended to."

The Filibuster, also, then rose against me, and said, "What I consider most shocking in the customs of New York, is that a young lady going to purchase new shoes, places her feet on the salesman's knee, in order to have them put on." On hearing this, all the circle burst out into a loud laugh which lasted several minutes. I was greatly abashed, and could make no reply. The fault had been entirely mine in introducing such a conversation. I was pretty rigorously dealt with, and at last concluded to laugh with the rest, and thus diminish the mockery of the company.

The excitement of the ladies became exceedingly great, and seemed like a kind of paroxysm. "Who has ever seen in Havana," they asked, "a lady paying three or five hundred dollars for a cloak, or investing five thousand dollars in the lace trimming of a dress? Where can you find a lady here so lavish as to hire a carriage, which she really does not need, as she has one of her own, and keeping it five or six hours, forgetting that it must be paid for at a high rate?"

"For God's sake I replied, "let us capitulate! let us capitulate!" But there was no remedy, and I had to suffer the penalty of our ladies' faults. * *

American ladies, not wishing to place their countrymen in "tight places," and causing them to be troubled, as I was, by faults, in which nobody but themselves are to blame, should reform their customs in that respect. I have come to the conclusion not to marry any lady until she has visited Havana, and learned some lessons of economy.—*Yankee Travels through Cuba.*

FRUIT IN CANS—PIE-PLANT, &c.—Putting up fruits, &c., in sealed cans, is not always successful, as many know from experience. Green corn has been often tried, and generally without success.—The *Ohio Cultivator* says, "Others have a more sad experience in canning rhubarb or pie-plant, which contains so much oxalic acid, that on being used from the cans has nearly been the death of whole families. Keeping in this way seems to give more virulence to its poisonous qualities, which are comparatively harmless when the plant is used fresh from the garden." Sealed glass bottles are much better than metallic cans for this purpose.

[Tomatoes have been put up in the self-sealing tin cans, with complete success, in our family. The fruit was as nice, in mid-winter, as when fresh from the vines.—ED. FARMER.]

TO MAKE FRUIT PIES.—No under-crust should be made to apple or any fruit pie. It is always heavy and not fit to eat. Place a narrow rim of paste around the edge of the plate, and fill with the fruit either raw or stewed, and cover it. The juices will be retained much better, and it will save a sight of butter and flour, which is no trifling consideration in these days, and what is of more consequence, save *dyspepsia*, which costs more.—After cutting, they are taken out with a spoon.